DOCUMENT RESUME

ED 292 330 FL 017 247

TITLE	Sample Undergraduate Linguistics Courses. Linguistics in the Undergraduate Curriculum, Appendix 5.
INSTITUTION	Linguistic Society of America, Washington, D.C.
SPONS AGENCY	National Endowment for the Humanities (NFAH), Washington, D.C.
PUB DATE	Dec 87
GRANT	EH-20558-85
NOTE	180p.; In: Langendoen, D. Terence, Ed., Linguistics in the Undergraduate Curriculum: Final Report; see FL 017 227.
PUB TYPE	Reference Materials - Directories/Catalogs (132) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	Animals; Bilingualism; Black Dialects; College Curriculum; Communication (Thought Transfer); *Course Content; Course Descriptions; *Course Organization; Discourse Analysis; Ethnic Groups; Faculty Development; Fantasy; Grammar; Higher Education; Individualized Instruction; Interdisciplinary Approach; Introductory Courses; Language Planning; *Linguistics; Literature Appreciation; Logic; Neurolinguistics; Persuasive Discourse; Phonology; Psycholinguistics; Science Fiction; Sociolinguistics; Suprasegmentals; *Undergraduate Study

ABSTRACT

Thirty-six nontraditional undergraduate courses in linguistics are described. Course topics include: animal communication, bilingualism, sociolinguistics, introductory linguistics, language and formal reasoning, language and human conflict, language and power, language and sex, language and the brain, language planning, language typology and universals, the languages of science fiction and fantasy, languages of the world, linguistics and related disciplines, linguistic approaches to point of view in fiction, linguistics and literature, faculty enrichment in linguistics, phonology, the politics of language, psycholinguistics, Black English, textual analysis, thinking linguistics, traditional grammars, suprasegmentals, designing and implementing undergraduate linguistics courses, and writing systems and decipherment. Each description includes information about the course level, content, required and suggested readings, syllabus, requirements, other features, and a source of further information. (MSE)

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LINGUISTICS IN THE UNDERGRADUATE CURRICULUM

APPENDIX 5

Sample Undergraduate Linguistics Courses

The views expressed are those of the authors and do not necessarily reflect the position of the LSA or the National Endowment for the Humanities.

The Linguistics in the Undergraduate Curriculum Project was funded by the National Endowment for the Humanities, Grant #EH-20558-85, D. Terence Langendoen, Principal Investigator.

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December 1987

PREFACE

The Linguistics in the Undergraduate Curriculum (LUC) project is an effort by the Linguistic Society of America (LSA) to study the state of undergraduate instruction in linguistics in the United States and Canada and to suggest directions for its future development. It was supported by a grant from the National Endowment for the Humanities during the period 1 January 1985-31 December 1987. The project was carried out under the direction of D. Terence Langendoen, Principal Investigator, and Secretary-Treasurer of the LSA. Mary Niebuhr, Executive Assistant at the LSA office in Washington, DC, was responsible for the day-to-day administration of the project with the assistance of Nicole VandenHeuvel and Dana McDaniel.

Project oversight was provided by a Steering Committee that was appointed by the LSA Executive Committee in 1985. Its members were: Judith Aissen (University of California, Santa Cruz), Paul Angelis (Southern Illinois University), Victoria Fromkin (University of California, Los Angeles), Frank Heny, Robert Jeffers (Rutgers University), D. Terence Langendoen (Graduate Center of the City University of New York), Manjari Ohala (San Jose State University), Ellen Prince (University of Pennsylvania), and Arnold Zwicky (The Ohio State University and Stanford University). The Steering Committee, in turn, received help from a Consultant Panel, whose members were: Ed Battistella (University of Alabama, Birmingham), Byron Bender (University of Hawaii, Manoa), Garland Bills (University of New Mexico), Daniel Brink (Arizona State University), Ronald Butters (Duke University), Charles Cairns (Queens College of CUNY), Jean Casagrande (University of Florida), Nancy Dorian (Bryn Mawr College), Sheila Embleton (York University), Francine Frank (State University of New York, Albany), Robert Freidin (Princeton University), Jean Berko-Gleason (Boston University), Wayne Harbert (Cornell University), Alice Harris (Vanderbilt University), Jeffrey Heath, Michael Henderson (University of Kansas), Larry Hutchinson (University of Minnesota, Minneapolis), Ray Jackendoff (Brandeis University), Robert Johnson (Gallaudet College), Braj Kachru (University of Illinois, Urbana), Charles Kreidler (Georgetown University), William Ladusaw (University of California, Santa Cruz), Ilse Lehiste (The Ohio State University), David Lightfoot (University of Maryland), Donna Jo Napoli (Swarthmore College), Ronald Macaulay (Pitzer College), Geoffrey Pullum (University of California, Santa Cruz), Victor Raskin (Purdue University), Sanford Schane (University of California, San Diego), Carlota Smith (University of Texas, Austin), Roger Shuy (Georgetown University), and Jessica Wirth (University of Wisconsin, Milwaukee).

Introduction

When the LUC Project was started, Arnold Zwicky (The Ohio State University and Stanford University) canvassed linguistics departments and programs for descriptions of courses dealing with topics that would not be viewed as traditional or "core" courses in linguistics, and that might be of interest to institutions attempting to enrich their set of offerings to undergraduates. The descriptions were analyzed by Ellen Prince (University of Pennsylvania), Robert Freidin (Princeton University), and D. Terence Langendoen (CUNY Graduate Center); about thirty were selected for inclusion in this volume based on their special interest for the study of language beyond the introductory level.

In addition to these course descriptions, the LUC Steering Committee decided to include in this volume three papers it had received as "position papers": "Language in Power and Persuasion" by Carlota Smith (University of Texas at Austin); "Offering a Faculty Enrichment Seminar in Linguistics" by Nancy Dorian (Bryn Mawr College); and "The Workshop Method: Designing and Implementing Undergraduate Linguistics Courses" by K.P. Mohanan (Stanford University). Finally, the committee decided to reprint some classic papers on undergraduate linguistics instruction: "The Undergraduate Linguistics Course" by the late Adrian Akmajian; "Languages of the World: A Semi-Individualized Introductory Linguistics Course" by Alice Faber and Hatte R. Blejer; "Phonemes and Features" by Arnold Zwicky; and "Word Accent, Phrase Accent, and Meter" by Arnold Zwicky. The first of these papers is reprinted by permission from the volume Linguistics and the University Education published by Michigan State University; the other three are reprinted by permission from the journal Innovations in Linguistics Education distributed by the Indiana University Linguistics Club and edited by Daniel A. Dinnsen, Indiana University.

Mary Niebuhr and Nicole VandenHeuvel of the LSA Secretariat developed the format and edited the descriptions to conform to this format. Bibliographical entries were altered, where necessary, to conform to the LANGUAGE style sheet, but no effort was made to complete the partial bibliographical references. We thank everyone who assisted in putting this volume together, especially those who submitted course descriptions from their respective colleges and universities.

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*Course description is not in LUC format.

Title **Animal Communication**

Level It is recommended that students have completed one course in linguistics, psychology, sociology, or anthropology.

Description This course investigates the ways in which animal communication systems differ from human language. In particular, students will consider whether these are qualitative or quantitative. The last part of the course is devoted to the ape language controversy and the species-specific nature of language.

Required Readings

Cheney, D.L. 1984. "Category formation in vervet monkeys." In R. Harre and V. Reynolds, eds., The Meaning of Primate Signals. Cambridge: Cambridge U Press.

Gardner, R.A. and B. Gardner. 1969. "Teaching sign language to a chimpanzee." Science; 165.

Gleitman, L.R. 1984. "Biological predispositions to learn language." In P. Marler and H. Terrace, eds., The Biology of Learning. Berlin: Springer-Verlag.

Gould, James. 1975. "Honey bee recruitment: The dance language controversy." Science; 189.

------------. 1984. "Natural history of honey bee learning." In P. Marler and H. Terrace, eds., The Biology of Learning. Berlin: Springer-Verlag.

Hockett, C.F. 1963. "The problems of universals in language." In Joseph Greenberg, ed. Universals of Language. Cambridge, MA: MIT Press.

Lancaster, Jane. 1968. "Primate communication systems and the emergence of human language." In P. Jay, ed., Primates. New York, NY: Holt, Rinehart and Winston.

Lenneberg, Eric. 1971. "A biological perspective of language." In B. Malmberg, ed., Readings in Modern Linguistics.

Limber, John. 1980. "Language in Child and Chimp." In T. Sebeok and J. Umiker-Sebeok, eds., Speaking of Apes. New York, NY: Plenum Press.

Marler, P. 1984. "Song learning: Innate species difference in the learning process." In P. Marler and H. Terrace, eds., The Biology of Learning. Berlin: Springer-Verlag.

Premack, D. "Language in Chimpanzee?" Science; 172.

Savage-Rumbaugh. 1984. "Acquisition of functional symbol usage in apes and children." In H. Roitblat, T. Bever, and H. Terrace, eds., Animal Cognition. Hillsdale, NJ: Lawrence Erlbaum Associates.

Sebeok, T. 1976. Contributions to the Doctrine of Signs. Bloomington, IN: Indiana U Press.

Seyfarth, R.M. 1984. "What the vocalizations of monkeys mean to humans and what they mean to the monkeys themselves." In R. Harre and V. Reynolds, eds., The Meaning of Primate Signals. Cambridge: Cambridge U Press.

Terrace, H., L. Petitto, R. Sanders, and T.G. Bever. 1979. "Can an ape create a sentence?" Science; 1970.

Terrace, H. and T.G. Bever. 1980. "What might be learned from studying language in the chimpanzee?" In T. Sebeok and J. Umiker-Sebeok, eds., Speaking of Apes. New York, NY: Plenum Press.

Thorpe, W.H. 1956. "The Language of birds." Scientific American; 195.

von Frisch, Karl. 1974. "Decoding the language of the bee." Science; 185.

Weiner, Linda. 1986. "Song learning in birds." Word; 37.

Syllabus

Communication Systems
Nature of Human Language
Iconic/Symbolic Aspects of Animal Signals
Learning/Innateness in Animal Communication Systems
Referential vs Affective Function of Animal Signals
The Ape Language Controversy: Syntax and/or Productivity?
Symbol Usage in Apes
Species-Specificity of Language
Biological Predisposition for Language

Requirements Midterm, one paper, final.

Source

York University
Instructor: Susan Ehrlich

Title	**Animal Communication**
Level	Most students are zoological sciences and psychology majors.
Description	This course looks at language as a system and compares it with animal systems of communication.
Required Readings	Andrew, R.J. The Origins of Facial Expressions. Geschwind, N. Specializations of the Human Brain. Moskowitz, B.A. The Acquisition of Language. Terrace, H.S. and T.G. Bever. What Might be Learned from Studying Language in the Chimpanzee? The Importance of Symbolizing Oneself. Thorpe, W.H. The Language of Birds. Wilson, E.O. Pheromones. Wilson, E.O. Animal Communication. Von Frish, Karl. Dialects in the Language of the Bees. Zihlman, A. and J. Lowenstein. Delphinus Sapiens: How Human are Dolphins?
Syllabus	Human Language Insects Honeybees Birds Dolphins and Whales Non-Human Primates Chimpanzees
Requirements	Two midterms, final, short paper
Other	FILMS "Signs of Apes and Songs of Whales" "Among the Wild Chimps" "First Signs of Washoe"
Source	Michigan State University Instructor: Carolyn Harford

Title	**Animal Language**
Description	The purpose for students is to study the ape language controversy and try to reach their own conclusions. To do this, students need to develop some background on the form and function of animal communication and human language. Students will then examine some language experiments with dolphins and the major ape-language work. Finally, students will try to evaluate the claims and counterclaims that are being fired back and forth across the academic battlefield.
Syllabus	The Ape-Language Controversy Animal Communication and Human Language Teaching Animals Language Evaluating the Ape-Language Controversy
Requirements	Three tests
Source	University of Wisconsin-Milwaukee Instructor: A. Hastings

Title	**Bilingualism**
Level	No prerequisites
Description	This course concentrates on all issues having to do with bilingualism, which we can define roughly as the phenomenon of speaking or knowing at least two languages. The topics we focus on fall traditionally under the domains of several different disciplines: psycholinguistics, language teaching, general education, psychology, and sociolinguistics.
Required Readings	Grosjean, Jean. Life with Two Languages. Hatch, Evelyn M. Psycholinguistics: A Second Language Perspective. Selinker, Larry and Susan Gass. Workbook in Second Language Acquisition.
Suggested Readings	Kachru, Braj, ed. The Other Tongue: English Across Cultures.
Syllabus	Becoming Bilingual: Second Language Learning (Phonetics, Morphology, Lexicon, Syntax, Discourse) Theoretical Issues: Language Learning, Age and the Second Language, The Bilingual Mind Social Issues: The International Scene, Closer to Home, Bilingual Education, Bilingualism in the Everyday World, Back to Discourse, Student Presentations
Requirements	Two exams, quiz, research paper, class presentation.
Source	University of North Carolina Instructor: Jeannine Heny

Title	**Ethnic Bilingualism in the United States**
Level	No prerequisites
Description	An introduction to sociolinguistic issues and methods in the study of linguistic diversity and bilingualism in American society. The focus is on understanding the language experience of Asian Americans, and particularly Southeast Asian refugees, in comparison with earlier European immigrants. The course is intended as well to provide research experience within an ethnic community.
Required Readings	Grosjean, Jean. Bilingualism. Additional readings
Source	University of Minnesota-Minneapolis Instructor: Bruce Downing

Title **Introduction to Sociolinguistics**

Level No prerequisites.

Description This course considers the different ways people speak. It deals with the linguistic features characterizing differences in language use and with the social and psychological factors associated with these differences.

The course surveys (a) the different language choices available to speakers in different situations (different languages, dialects, or styles), and (b) the factors influencing the choosing of one way of speaking rather than another. Sociolinguistics is the study of language in its sociopsychological setting.

A particular emphasis of this course will be "Language and Social Issues." That is, we will look at how group memberships (gender, socioeconomic class, ethnic group, age, etc.) influence the way people speak, and how people are judged, based on the way they speak.

Required Readings

Texts: Trudgill, Peter. 1983. Rev. ed. Sociolinguistics. Penguin Books.
Ferguson, Charles A. and Shirley Heath, eds. 1981. Language in the USA. New York, NY: Cambridge U Press.

Brown, Roger and A. Gilman. 1958. "The pronouns of power and solidarity." In P.P. Giglioli, ed., Language and Social Context. pp. 252-81.
Ervin-Tripp, Susan. 1976. "Is Sybil there? The structure of some American English directives." Language in Society; 5:25-66.
Gleason, Jean B. and E.B. Grief. 1983. "Men's speech to young children." In Barrie Thorne, C. Kramerae, and N. Henley, eds., Language, Gender and Society. pp. 140-50.
Goodwin, Marjorie. 1980. "Direct-response speech sequences in girls' and boys' task activities." In Sally McConnell-Ginet et al. eds. Women and Language in Literature and Society. pp. 157-73.
Grief, E.B. and J.B. Gleason. 1980. "Hi, thanks and goodbye: More routine information." Language in Society; 9: 159-66.
Grosjean, Francois. 1982. Life with Two Languages.
Haugen, Einar. 1973. "The curse of Babel." In Einar Haugen and M. Bloomfield, eds., Language as a Human Problem. pp. 33-44.
Keenan, Elinor. 1974. "Norm-makers, norm-breakers: Uses of speech by men and women in a Malagasy community." In Richard Bauman and J. Sherzer, eds., Explorations in the Ethnography of Speaking. pp. 125-43.
Labov, William. 1972. "The social stratification of (r) in New York City." In W. Labov, Sociolinguistic Patterns. pp. 42-69.
Lourie, Margaret. 1978. "Black English Vernacular: A comparative description." In M. Lourie and N. Conklin, eds., A Pluralistic Nation. pp. 78-93.
O'Barr, William and B. Atkins. 1980. "'Women's language' or 'powerless language." In Sally McConnell-Ginet et al., eds., Women and Language in Literature and Society. pp. 93-110.
Platt, John. 1977. "A model for polyglossia and multilingualism with special reference to Singapore and Malaysia." Language in Society; 6: 361-78.
Scotton, Carol Myers. 1982. "The possibility of code-switching: motivation for maintaining multilingualism." Anthropological

Linguistics; 24: 432-44.

West, Candace and D.H. Zimmerman. 1983. "Small insults: A study of interruptions in cross-sex conversations between unacquainted persons." In Barrie Thorne, C. Kramerae, and N. Henley, eds., Language, Gender, and Society. pp. 102-17.

Syllabus

Language Use and Its Social Significance
The Social Aspect of the Structuring of Everyday Conversation
What is Communicative Competence?
Types of Linguistic Varieties and Their Uses I: Styles and Regional/Social Dialects
Types of Linguistic Varieties and Their Uses II: Ethnic Identity
Types of Linguistic Varieties and Their Uses III: Language and Gender
Language as Social Identity I: Multilingualism
Language as Social Identity II: Social Allocation of Varieties
Language as Social Identity III: Linguistic Choice as a Social Tool and Index

Requirements Two midterms, one final.

Source University of South Carolina
Instructor: Carol M. Scotton

Linguistics and the University Education
Michigan State University, 1980 (pp. 85-95)

THE INTRODUCTORY UNDERGRADUATE LINGUISTICS COURSE *

Adrian Akmajian
University of Arizona

Linguistics has made some remarkable strides in recent times, and awareness of the field in the academic world has grown steadily over the past two decades. Scholars in fields such as philosophy, psychology, sociology, anthropology, computer science, speech and hearing sciences, and education have become increasingly interested in linguistics, and this interest is reflected in the formation of new inter-disciplinary fields of study, with names such as cognitive science. But despite this growing awareness in certain other fields, linguistics still remains relatively obscure within the academic world as a whole, and is virtually unknown to the general educated public. The field may be recognized by name, but its intellectual content and results are far from understood, and people who are otherwise well educated in the natural sciences or humanities have surprisingly little knowledge of the nature of language. Simply consider the situation of the last decade or so, in which certain social scientists have told us that Black children have no language, while other social scientists have assured us that chimpanzees and gorillas do have language. It seems that linguists have made little progress in dispelling long-standing linguistic myths and prejudice, and for whatever reason, haven't gotten the word out to those who need to know the results of the field.

There is little doubt that a healthy future for the field will depend in part on how broad an audience it reaches. Unfortunately, linguistics is a subject not taught in the high schools, and it is only recently that it has appeared in the college undergraduate curriculum. If the field is at least to survive (never mind flourish) in the coming decades, it is imperative that we introduce it to the college audience and actively work to establish it firmly in the undergraduate curriculum. The key to this effort will lie in the introductory course, for it is there that we will begin to dispel those persistent myths about language, and more importantly, to build the kind of interest in the field that will motivate students to study further. If we grant the importance of the introductory course, then what, exactly, should we be striving to accomplish in teaching it?

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The single most important goal of the course is a modest one, namely, to build interest in the field of linguistics. A more ambitious project, e.g. training introductory students to be able to carry out linguistic analysis, strikes me as fruitless. If by the end of the introductory course students have a gut feeling for the field, a general impression that it is exciting and deals with substantive issues, and a desire to find out more about the subject, then we will have succeeded admirably. It is not necessary to indulge in excessive watering down or over-simplifying the field for the sake of building student interest. In fact, that interest is best aroused by showing that the field deals with challenging and difficult questions, questions which are surely among the most exciting in human cognitive science.

It would be useful here to examine the introductory course taught at the University of Arizona, if only to have a concrete reference point for discussion. The course is based on the textbook by Akmajian, Demers and Harnish (1979)--indeed, the text was developed from teaching the course--and generally covers the topics given in the text in the order presented there. Students are assigned chapters as background reading for the lectures, which present some new material along with review of important points covered in the reading.

The course begins with a discussion of animal communication systems (in particular, bee, bird, and primate communication) as a means of introducing the general question, what is language? Comparison of animal communication systems with each other and with human language not only stimulates a great deal of interest (students have invariably read a popular account of some animal language or other), but also serves as an excellent pathway to human language: by the time students begin to study human language, they have already begun to think about communication in a wider context, and are alerted to looking for important features of human language as the course progresses. A course which begins--and in fact, ends--on the general theme of communication between biological organisms, can put more traditional, structurally oriented topics of linguistics into perspective that helps students grasp the broader implications of the field. The initial part of the course takes up the first week or so (three or four lectures).

The second part of the course deals with the more or less traditional areas of linguistics, including phonology, morphology, syntax, semantics, pragmatics, and language variation and change. A typical timetable for this section is as follows:

Phonology -- 3 weeks
Morphology -- 1 week
Syntax -- 2 weeks
Language Variation -- 2 weeks
Semantics/Pragmatics -- 2 weeks

Given this organization, the basic sub-fields of linguistics take up 2/3rds of the over-all course work in a 14½ week semester. It is important to stress, however, that not all of these topics will be covered by all teachers, and the particular timetable listed above reflects a particular set of interests, not necessarily shared by everyone teaching the course. Different teachers will omit different chapters and topics, and this is entirely appropriate. The point is to build interest in the field, not to introduce the student to every conceivable area of it.

One often hears that the introductory linguistics course should not be too technical or heavy on formalism, and there is a sense in which that seems sound. That is, aside from phonetic transcription exercises (which many students find enjoyable), it is generally not a good idea to ask introductory undergraduate students to produce formal representations or technical descriptions of linguistic phenomena. However, this does not mean that students should not be exposed to formalisms or technicalities. Indeed, a special effort should be made to show students how certain intuitive generalizations can be formalized for each subfield of linguistics. In the area of syntax, for example, one can show how phrase markers represent sentence structure, how phrase structure generalizations can be formalized in PS rules, or how transformations can be formalized. It is difficult to see how students can get a feeling for the nature or depth of linguistic analysis if they are not exposed to the more technical or formal aspects of the field. Further, undergraduates should be able to recognize certain gross properties of formalisms presented to them. For example, a quiz on syntax can present a student with a fully-drawn phrase marker (without terminal words), to be used as a reference in answering questions such as: What are three aspects of syntactic structure represented in a phrase marker?, How can you define *subject* for English using phrase markers?, Given the above phrase marker, supply each terminal line with an English word such that you form a possible sentence, and so on. I believe that we can present students with reasonably well motivated technical aspects of linguistics without overwhelming them in the process. (Let us not forget that many linguistics students are also studying chemistry, biology, and algebra.)

Turning now to the specific goal of building interest in the field, are there any teaching strategies that seem particularly useful in presenting the subject to students? There are probably as many strategies as there are teachers, but the following two strategies seem quite effective in stimulating discussion and argumentation:

A. For each linguistic topic covered, try to apply it to some social/educational issue, if possible.

B. For each linguistic topic covered, try to introduce and explain it by using an in-class exercise, drawing on the students' *intuitive knowledge*, rather than introducing it by straight lecturing.

How might these strategies be realized in particular cases?

To take strategy A, there are a number of interesting issues that one can discuss. For example, after class lectures on the human vocal tract and articulation of speech sounds, a teacher can ask the class what is meant by the popular term, "sloppy speech". Given the incredible complexity of the vocal tract and the intricate interplay of mechanisms that produce speech, can we say that this physiological system is ever "sloppy"? If one is not talking about actual articulation, then what can be meant by "sloppy" speech, or "lazy tongues", and so on? If a school teacher says of Black children that they don't know how to form sounds, or use their mouths, or move their lips, how can we interpret this given what we know about the biological endowment of the vocal tract? The point of these questions is not necessarily to steer students to some "right" answer, but rather to stimulate class discussion--and it is surprising how lively and heated the arguments can become. The role of the teacher is to ask students how they can inform the debate with what they've just learned about the linguistic topic.

Turning to another example, after discussing morphological word formation processes, one can raise the question of how new words enter a language. A question that students seem particularly concerned about is whether the formation of new words is "good" or "bad" for the language. Is English getting "better" or "worse" because of the formation of new words? Again, the point is not to settle the issue (if one can even make sense of the question), but rather to encourage students to use evidence from morphology and word formation to build a case for a certain point of view.

As a final example, notice that topics such as syntax and language variation raise all sorts of good questions relating to social or educational issues, most obviously the whole matter of prescriptive vs. descriptive grammar, the status of dialects, and so on.

Turning now to strategy B above, one cannot underestimate the importance of using in-class exercises designed to make students aware of their own intuitive linguistic knowledge. Linguistics as a subject matter is never very meaningful to students until they recognize that the field deals with something that exists in their own heads. For it is then that students realize they have access to the crucial data they will need to evaluate proposals, and the field is no longer some abstract study of something that exists "out there". One of the best examples of such an in-class exercise is based on English tag question formation (see Langendoen (1970) chapter 2, Akmajian and Heny (1975) chapter 1). English tags provide a particularly rich source of illustrative examples for syntax, pragmatics, and language variation, and this construction can be used repeatedly, each time illustrating a different point.

To see how such an exercise can be used, we begin with simple sentences, such as:

(1) a. John is here
b. They are watching us
c. Mary hasn't left now

For each simple case, the teacher asks the class to provide the appropriate tag question, and here we get the expected forms *isn't he?*, *aren't they?*, and *has she?* (In addition, some students will give answers such as *right?*, or various other tags such as *John is here, is he!*, and this provides a good opportunity to begin distinguishing the various kinds of tags found in English, making it clear that the exercise is based on the "request-for-confirmation" tag.) The simple sentences allow the class to discover basic properties of tag formation, such as agreement of tag pronoun with antecedent subject, agreement of auxiliaries, and negative-positive polarity switch. Hence, in the first phase the tag exercise can illustrate such grammatical notions as subject, auxiliary, agreement, number, gender, person, noun phrase, pronoun, negative, positive, inverted word order, and so on. At this point, the reaction of the class is usually that the teacher is presenting something obvious and easy, and in fact it does no harm to encourage this attitude at the beginning, since some rather surprising facts will follow in the next phases of the exercise. Most important, here and throughout the exercise, is to stress that hypotheses about tag formation are based on the grammaticality judgments that the students themselves are making.

Having laid out the basic features of the tag rule, one can then concentrate in more detail on one of its subparts, such as pronoun agreement. At first, pronoun agreement in the tag appears to be governed simply by the following principles:

(i) determine the person, number and gender of the subject

(ii) given (i), insert the appropriate pronoun in the tag (i.e. the pronoun with the same values for person, number, and gender).

At this point, one can present a series of examples that will show the class that the matter is not so simple. The sentences in (2) make a nice starting point (see Langendoen (1970) for further cases):

(2) a. The dog is sick

b. The ship left the harbor

c. The baby is hungry

With these examples, one begins to get examples of language variation within the class itself, as in the following:

(3) a. The dog is sick, isn't it?/isn't he?/isn't she?

b. The ship left the harbor, didn't it?/didn't she?

c. The baby is hungry, isn't it?/isn't she?/isn't he?

Students begin to realize that variation exists not only across the group, but within single individuals as well. Such examples show that there is not necessarily only one choice for the tag pronoun, and that determining gender is not quite the trivial task it seemed at first.

Determining the number is not a trivial matter either, as the following contrast can show:

(4) a. Both John and Bill will be there

b. Either John or Bill will be there

The response to (4a) is invariably won't they; however, (4b) elicits either won't they, won't he, or a significant number of right?'s. Sentence (4c) below often elicits a refusal to answer:

(4) c. Either Mary or John will be there

For students that are often victims of the misconception that English grammar is completely explained by composition handbooks, such examples can be quite effective in showing that much remains to be discovered.

Continuing on the theme of determining number, sentences with quantified noun phrases as subjects, such as everyone or no one, present further interesting data:

(5) Everyone is at home now, aren't they?

This example can be used to show that certain subjects cannot be classified exclusively as singular or exclusively as plural, but are in fact either singular or plural depending on the syntactic process one looks at. With respect to verb agreement, everyone is syntactically singular (cf. is); with respect to pronoun choice in the tag, everyone is plural (cf. they). This is a natural point to discuss the traditional prescriptive notion that noun phrases such as everyone take singular he (his, him) as the "proper" pronoun choice:

(6) Everyone lost his books

One can begin to wean students from this view by presenting examples such as:

(7) Everyone lost his books yesterday. I wonder if he found his books today?

Clearly, in the second sentence of (7), neither he nor his can refer to everyone (i.e. the scope of the quantifier doesn't cross sentence boundaries), and this can be used as the basis for a discussion about he vs. they as the pronominal form for everyone.

Finally, one can consider a case which shows that pronoun choice in the tag cannot be determined from the subject alone, even if one has arrived at an analysis of its properties. Consider the following contrast, where the tags reflect a very consistent pattern in the classes I have polled:

(8) a. John was the one who stole the cookies, wasn't he?
b. The one who stole the cookies was John, wasn't it?/ *wasn't he?

The shift to it in the second example is a consistent change, one which surprises students and stimulates a good deal of discussion. The choice of it in (8b) is clearly not based on properties of the subject alone, for that same subject in a different sentence cannot be tagged by it:

(9) a. *The one who stole the cookies just walked in, didn't it?
b. The one who stole the cookies just walked in, didn't he/she?

Examples (8) and (9) show that sometimes the choice of pronoun in the tag is the result of a global analysis of the sentence, and not merely the subject. It seems that sentences that are identificational or specificational in form--sentences of the form x=y--can have the tag with it. This is confirmed by the distinction between (8b), a sentence of the form x=y, and (9a), a typical predicational sentence. We also find confirmation from replies to WH-questions:

(10) a. Who stole the cookies?
b. It was John (who = John)

Notice that the analysis so far is still insufficient to distinguish between (8a) and (8b), both of which are identificational sentences, but only one of which has a tag with it. Clearly, the difference in word order of the two sentences plays a role.

Whatever the explanation turns out to be, we nevertheless have a good example illustrating the idea that pronoun choice in the tag is not a simple matter of inserting an appropriate pronoun for the subject of the sentence. It is clear that the pronoun choice is a result of a rather sophisticated analysis of the whole preceding sentence. To present this particular point in a straight lecture is no doubt adequate; but when the point emerges from a class exercise, in which the students themselves have made the linguistic choices and judgments, it will be far more significant and interesting than any lecture could make it. Finally, students will usually ask for "the right" explanation for data such as (8) and (9) above, and a good teacher will often try to provide an acceptable explanation. But it can be valuable, at certain points in a course, to leave certain problems unexplained and a bit mysterious. For nothing can better illustrate the current state of linguistics, where we often have questions but no answers; and it is precisely this that makes linguistics an exciting field, and encourages inquisitive students to look further.

Having presented students with basic subdisciplines of linguistics in the second part of the course, the final two weeks or so can be spent dealing with topics that broaden the perspective once again, such as language and brain function, language processing and acquisition, teaching artificial languages to chimpanzees, and so on. In this section of the course, the class can return to a general theme such as the nature of communication, using the theme to tie together various specific strands previously introduced in the course. For example, the question of whether chimpanzees can learn and use language in the manner that humans do is a particularly useful theme allowing students to tie together the previously covered sections on animal communication and human language and communication.

The content and manner of presentation of the introductory course are crucial factors in building interest in the field on the part of students, but these are not the only factors that will determine the success of the course in the long run. For we must not only address the issue of how the subject matter is to be presented, but also the question of what audience we should try to reach. Linguistics is important enough to be included in the fundamental humanities curriculum of the university, and in the ideal case the introductory linguistics course would reach a broad spectrum of undergraduates in liberal arts. Whether or not this comes about at some point in the future, a more reasonable goal at present is to try to target specific audiences among undergraduate students to attract into the course. In particular, education students are one of the most important groups to reach at present. There is little doubt that language awareness and attitudes are significantly shaped by language instruction in the public schools. If we ever hope to see changes for the better in awareness, attitudes, and instruction, then we must try to attract education majors into linguistics courses. The benefits will certainly be mutual, for the field of linguistics could profit enormously from school teachers who introduce some linguistics into their own classrooms, and make their own students aware that the field exists.

The link between linguistics and education has so far been a tenuous one. For various historical reasons, linguists as a group haven't been all that interested in reaching teachers, and teachers often have had less than flattering views about linguists. Given the very positive benefits each side could reap from the other, this state of affairs is all too unfortunate. But the situation is not hopeless, and if we have had little luck in reaching teachers, we can at least try to reach undergraduate education majors. At the University of Arizona, elementary education majors now take Linguistics 101 as a requirement (with the result that the course has grown to 200 students per semester), and all indications are that the students find the course informative and even enjoyable. The most significant comment from the students, and a very common one at that, is that the course taught them things they had not known before, and had not been exposed to in any other course they had taken. As one might guess, the sections of the course on language variation, dialects, Black English, and related topics, were the most significant for education majors.

This brings us back to the theme of teaching introductory linguistics with the goal of building interest in the field. If we succeed in attracting education majors, for example, then we have a serious professional responsibility for presenting linguistics in a way that shows the field to be lively and relevant. Indeed, the teaching strategies mentioned above--relating linguistic topics to social/education issues, and presenting linguistics topics in active class exercises--developed from a need to show students that linguistics could be important to them. In the end, the future of linguistics depends in large part on whether students become attracted to the field. And linguists owe it to themselves to strive more than ever to show students that the field is, and will continue to be, one of the most promising investigations into human nature in current scientific inquiry.

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Akmajian, A., R. A. Demers, and R. M. Harnish. 1979. Linguistics: An Introduction to Language and Communication. Cambridge, Mass.: MIT Press.

Akmajian, A., and F. W. Heny. 1975. An Introduction to the Principles of Transformational Syntax. Cambridge, Mass.: MIT Press.

Langendoen, D. T. 1970. Essentials of English Grammar. New York: Holt, Rinehart and Winston.

Title	**Language and Formal Reasoning**
Level	No prerequisite, satisfies General Education Requirement in Quantitative and Formal Reasoning.
Description	This is an introduction to the study of linguistic meaning through logical analysis. It has a twofold goal: to introduce students to the subject matter of linguistic semantics, and also to exercise and sharpen students' logical reasoning abilities by providing a logical "shorthand." It begins with a study of both the grammar of English and a logical language, the Predicate Logic with Quantification. The first part of the course presents the analysis of predication and quantification in the logical language and compares the "logical structure" of English sentences to their syntactic structure. Later the course turns to solving problems using the logic that was learned to clarify the process of reasoning.
Required Readings	Text: Hodges, W. Logic. Supplementary handouts.
Suggested Readings	Allwood, Andersson, Dahl. Logic in Linguistics.
Syllabus	Language, Semantics and Logic Propositions, Truth and Entailment Syntax of English: Phrase Structure and Categories Representing a Sentence's Structure: Simple Sentences Complex Sentence Structure The Logic of AND and OR Complex Formulas and Truth Tables The Logic of NOT Formalizing Sentences of English The Whole Truth and Nothing But The Logic of Conditions Derivations Using Logical Equivalences Proof Strategies: The Files of Inspector Craig Laws of Inference with Conditionals Proofs and Derivations Proofs Using the Rules of Inference Terms and Quantifiers Predicates and Relations Formalizing Quantifier Sentences Logical Equivalence among Quantifiers Arguments with Quantifiers Predicate Diagrams Modality
Requirements	Frequent homework exercises, two midterms, final exam
Source	Cowell Collge, University of California-Santa Cruz Instructor: Bill Ladusaw

Title	**Language and Formal Reasoning** **(An Introduction to Logico-Semantics)**
Level	Honors Seminar, College of Liberal Arts Summer course for high-ability high school students
Description	The course introduces the two component disciplines (logic and semantics) and their interrelationship to give students a feeling for what is involved in the formalization of intuitive concepts.
Required Readings	Text: Kac, M.B. A Semantic Approach to Logic.
Syllabus	Conditional Statements and Entailment Mathematical Tools for Logico-Semantics An Elementary Theory of Logical Relations Sentential Logic and Boolean Algebra Compositional Semantics for a Fragment of English Another Theory of Logical Relations
Requirements	Written assignments, final exam
Source	University of Minnesota-Minneapolis Instructor: Michael Kac

Title **Language and Human Conflict**

Level Junior/Senior

Description "Language and human conflict" is an organizing theme, not a body of content per se. It is a focus upon language (and language differences) as both cause and consequence of social and cultural conflict. By examining language in this way, we can get a sense of the extent to which language drives social interaction--not the "content" of language so much, but the nature of the code itself and the attitudes and values we attach to it.

Required Readings

Black English in the Inner City (case study)
Spanish Bilingualism (case study)

BLACK ENGLISH

Baratz, Joan. 1970. "Educational considerations for teaching Standard English to Negro children." In Ralph Fasold and Roger Shuy, eds., Teaching Standard English in the Inner City. Washington, DC: Center for Applied Linguistics. pp. 20-40.

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Baugh, John. 1983. Black Street Speech: Its History, Structure, and Survival. Austin, TX: U TX Press.

Fasold, Ralph. 1981. "The relation between Black and White speech in the South." American Speech; 56: 163-89.

Farrell, Thomas. 1983. "IQ and Standard English." College Composition and Communication; 34: 470-84.

Jones, Rachel. 1982. "What's wrong with Black English?" Newsweek; 103(Dec): 174.

Kennedy, Graeme. 1972. "The language of tests for young children." In Bernard Spolsky, ed., The Language Education of Minority Children. Rowley, MA: Newbury House. pp. 164-81.

Kochman, Thomas. 1972. "Toward an ethnography of Black American speech behavior." In Thomas Kochman, ed., Rappin' and Stylin' Out: Communication in Urban Black America. Urbana, IL: U of Illinois Press. pp. 241-64.

Labov, William. 1964. "Stages in the acquisition of Standard English." In Roger Shuy, ed., Social Dialects and Language Learning. Champaign, IL: NCTE. pp. 77-103.

Labov, William. 1969. "The logic of Nonstandard English." Florida Foreign Language Reporter; 7: 60-74.

Labov, William. 1972. Language in the Inner City: Studies in the Black English Vernacular. Philadelphia, PA: U of Pennsylvania Press.

McDavid, Raven. 1967. "A checklist of significant features for discriminating social dialects." In Eldonna Evertts, ed., Dimensions of Dialect. Champaign, IL: NCTE. pp. 7-10.

McDavid, Raven and Virginia McDavid. 1951. "The relationship of the speech of American Negroes to the speech of Whites." American Speech; 26: 3-17.

McDavid, Raven and Lawrence Davis. 1972. "The dialects of Negro Americans." In Elaine Smith, ed., Studies in Honor of George L. Trager. The Hague: Mouton. pp. 303-12.

Rickford, John. 1985. "Ethnicity as a sociolinguistic boundary." American Speech; 60: 99-125.

Tarone, Elaine. 1973. "Aspects of intonation in Black English." American Speech; 48: 29-36.

Yellin, David. 1980. "The Black English controversy: Implications

Title	**Language and Power**
Level	No prerequisite
Description	This course will investigate the role of discourse in society. Various oral discourse genres, such as conversational interactions, will be analyzed to determine the means by which participants create and maintain dominance, power and status through "talk." In addition, written discourse genres, such as newspaper reports, will be examined to determine the means by which ideology is conveyed through linguistic choices. Specific topics will include: political discourse, legal discourse, cross-cultural discourse, classroom discourse, parent/child discourse, and male/female discourse. Practical applications of this type of discourse analysis will also be discussed. The course is designed to be of interest to students in linguistics, sociology, political science, education, and anthropology.
Required Reading	Wardhaugh, R. 1985. How Conversation Works.
Requirements	Two tests, research paper, assignments, class participation.
Source	York University Instructor: Susan Ehrlich

Title **Language and Sex**

Level Sophomore standing.

Description The course will deal with linguistic differences between males and females with respect to the use and the structure of language. It will also address the question of what linguistic analysis can tell us about how males and females are viewed by the speakers of various languages.

Sex-linked speech differences in various languages will be examined, as well as nonverbal communication. We will also look at phenomena which reveal attitudes toward the sexes, such as sex-exclusive derogatory terms and the use of noun classifiers in various languages. The underlying causes of these phenomena will be discussed.

Required Readings Text: Thorne, B., C. Kramarae and N. Henley, eds. 1983. Language, Gender and Society.

Suggested Readings Eakins, B. and G. Eakins. 1978. Sex Differences in Human Communication.

Syllabus

Stereotypes of Women's and Men's speech
Language and Woman's Place: Empirical Studies of Amount of Talk, Vocabulary Differences, Expletives and Tag Questions
Linguistic Variation and Change: Men's and Women's Roles
Intonational Differences
Conversational Strategies
Language Acquisition
Women and Writing
Language in the Classroom
Sexism in Language Structure
Names, Titles, and Other Terms of Address
Semantic Change

Requirements Two tests, one paper, short assignments, class and tutorial participation

Source York University
Instructor: Ruth King

Title	**Language and the Brain**
Description	Introduction to the study of neurolinguistics--the study of the relation between brain organization and language behavior. Topics include: study of aphasia from a clinical, neurological, and linguistic perspective; split brain patients; and laterality of brain function. In addition, the effects of neurological deficits on higher critical functions such as artistic realization (much and art) will be considered.
Required Readings	Gardner. Shattered Mind Sarno, M.T. Acquired Aphasia
Suggested Readings	Berndt, R. and A. Caramazza. 1980. "A redefinition of the syndrome of Broca's aphasia." *Applied Psycholinguistics*; 1: 225-78. Blumstein, S.E., W. Milber, and R. Shriere. 1982. "Semantic processing in aphasia: Evidence from an auditory lexical decision task." *Brain and Language*; 17: 301-15. Caplan, D., ed. Biological Studies of Mental Processes. Gatz, A. Manter's Essentials of Clinical Neuroanatomy and Neurophysiology. Geschwind, N. 1965. "Disconnexion syndromes in animals and man." *Brain*; 88: 237-94, 585-644. ------------- 1972. "Language and the brain." *Scientific American*: 76-83. Goodglass, H. and E. Kaplan. The Assessment of Aphasia and Related Disorders. Heilman and Valenstein. Clinical Neuropsychology. McGlone, J. 1980. *Behavioral & Brain Sciences*; 3(2): 215-64. Springer, S. and Deutsch. Left Brain, Right Brain.
Syllabus	Introduction to Clinical Neurology and Neuropsychology The Aphasia Syndromes--Clinical, Neurological, and Historical Aspects Language Processing in Aphasia Role of the Right Hemisphere in Language Processing Critical Periods and Aphasia in Children Sex Differences in Brain Organization Neurological Deficits and Other Higher Cortical Functions
Source:	Brown University Instructor: Sherry Baum

Language in Power and Persuasion

Carlota S. Smith

The patterns of language in public power and persuasion reveal a great deal about a society. Language plays a central role in public persuasion, and it is an important factor in social and political life. The language of powerful groups reinforces their position of dominance; that of the less powerful acts as a self-fulfilling prophecy, maintaining a position of subordination. The study of these patterns of language use can be a significant component of a liberal arts education. It is especially important in a mass society such as ours, where techology has a driving force of its own and the individual is often quite remote from public events. The study shows through cases of different types that language is a dynamic element in society.

The language of power and persuasion can be studied with the tools of rhetorical and pragmatic analysis. Rhetorical analysis explicates the textual functions and effects of words and phrases, and syntactic structures. Pragmatic analysis looks at implications, expectations, the effects of different contexts. The study depends on an understanding of language as a symbolic human activity and its role in communication. These essentially language-oriented approaches must be supplemented by others that identify the factors involved in the persuasive use of language. People are susceptible to overt and tacit appeals of various kinds, especially in the symbolic domain of language: appeals to emotion can be made with language that plays on needs, evokes important cultural myths, etc. The constraints and effects of mass media must be considered as well. The suggested approach is inter-disciplinary: language use cannot be studied in a vacuum. Psychological, political, economic, social and historical considerations may all be relevant; this type of study can develop in a number of ways, depending on the interests and expertise of the people involved.

The linguistic focus offers a way for students to approach quite directly thorny and important issues in current affairs. Since everyone commands their own language, language tools present a kind of analysis that is immediate and available to everyone. The course of study advocated here can be at once a kind of consciousness raising, a spur to action, and training in active participation.

In what follows I will briefly discuss the areas of persuasion and language and power, and consider the types of language analysis that would be useful in studying them. I then give some specific topics, and some suggested readings, that might be covered in courses. These topics might appear in sections of a general introductory linguistics course; they might be part of an interdisciplinary course; they can also be put together to make up a single course.

1. Persuasion In our society people are bombarded with persuasive messages of all kinds; they frequently feel manipulated, puzzled, cynical, and overwhelmed with information sickness. Such feelings contribute to a pervasive sense of helplessness and passivity. There is a real danger in modern society that, understanding little of what is happening in public life, people are disinclined to participate. The university can make a difference by training people so that they have some understanding of persuasion. For self-defense people can be equipped to recognize and deal with the mass persuasion that they encounter. There is another, more ambitious goal: to train people to be active members of society. Thus one goal of training in persuasion is itself persuasive: to convince people that active participation in society is possible, and to equip them for such participation.

The basic questions in a study of persuasion are these: What is effective persuasion, and what ineffective? What is legitimate in persuasion, and what illegitimate? How does persuasive language work? what are the psychological, political, and social factors underlying persuasion?

These questions can be pursued by looking at persuasive language itself, and at the principles of persuasion developed in classic and modern rhetorical studies. Aristotle distinguished the main components of communication in the Rhetoric - source, audience, and message - and they appear in all models of communication. In considering mass communication the special properties of the mass media, such as the role of the receiver in hot and cool media (cf Marshall McLuhan), are also important factors.

Public persuasion appears in the political, social, and commercial spheres of society. However, the most interesting ways of organizing studies of persuasion cut across these categories to more notionally focussed topics. Advertisements, for example, can be analyzed along the same lines whether they are selling a candidate, an institution, or a product. Indeed, many current discussions of persuasion make no such distinction. (This is in itself worthy of note.) Students can learn to identify the types of appeal that are used in a given situation, the way language together with other modes is deployed to make the appeal, the context of the appeal. Another topic is that of persuasive speeches, discussions, reports; that is, the study of hortatory language. The basic patterns of argument and appeal underlie persuasion generally; people who can recognize these patterns are in a position to understand and evaluate the particular versions that they encounter, and to appreciate the significance of presentations such as those based on an enthymeme or missing premise. The propaganda campaign is another general topic. Modern propaganda arose in a political context, but according to some scholars it is now found in mass persuasion generally. Others believe that the ideological is essential to the notion of propaganda. The distinction between "black" and "white" propaganda is helpful; although both types use many propaganda techniques, only the former involves deception.

Persuasion in the area of public policy is more subtle, since it does not usually involve overt appeals. Persuasive language is routinely used to make attractive the policies that are in place or that are being advocated, and to stigmatize other policies. For example, the language used to talk about such matters as welfare recipients and programs, education, health programs, is controlling and revealing. Much public policy is almost removed from scrutiny by the distancing nature of its language: either through technical terms and phrases that are beyond the comprehension of most people, or by forests of beaurocratic language that have the same effect of remoteness. The persuasive power of colorless and beaurocratic language is important and little understood. Discussions of the arms race and the destructive power of nuclear weapons are a strong example.

Controversial issues can hardly be avoided, of course, in studies of this type. Questions about persuasion provide a useful way for students to approach such issues. Such questions lead to direct recognition of different viewpoints and positions; the amount of accompanying scholarly analysis (political, sociological, psychological) may vary with the interests of students and teacher. Issues that students have found interesting and important include propaganda in Nazi Germany, in the Soviet Union and China, in the United States; the sequestering of the Japanese in California during World War II; abortion; evangelism; gun control; arms control.

2. Language and Power In another area, language is used persuasively to assert and enhance the power of people in positions of dominance. There are striking consistencies in the talk of those who have power in a society. Here language is not deployed to persuade, in the sense of a focussed presentation of an issue or a decision. Rather, choices are made consistently by people in powerful positions, so that a powerful style can be identified. Such patterns have been identified for members of dominant social and ethnic groups, and for people in structured situations such as courtrooms and medical interviews. Thus patterns of talk can reveal a great deal about the ideas and attitudes of those who use them. The talk may be more or less conscious, depending on the situation: people may be more aware of talking to and about blacks as subordinate than of similar patterns that they use toward women. Powerful language is controlling and definite. It is often used to denigrate and deny - indeed, to oppress - members of subordinate groups.

The language of oppression, as Haig Bosmajian calls it in his book of that name, does not occur in a vacuum. To understand the power of such language one must consider the controlling properties and magic of labels and categories; and the role of stereotypes. Bosmajian shows dramatically that the patterns of oppressive language are very much the same, although the groups and their situations are quite different. Understanding of the context of oppressive language is essential. Economic and political factors invariably accompany the use of language to denigrate and isolate a group.

There is a style of speech that is typical of the subordinate, less powerful, members of society. The style is tentative and polite, with many hedges, disclaimers, requests for confirmations and reassurance. It can be called powerless speech. The main characteristics occur in the popular stereotype of women's speech, as identified by Robin Lakoff. There is a body of research that has investigated the actual occurrence of these characteristics. It turns out that many of them are generally found in the speech of women. They are also occur in the speech of other groups that are subordinate in a given society; and, significantly, they are used by individuals who feel themselves relatively powerless in highly structured situations. researchers studied talk in many situations by many people. To arrive at these conclusions one must consider not only the frequency of certain words and structures, but also how they functioned in different situations. This research demonstrates very clearly the complexity of the phenomenon.

Most of the highly structured situations referred to above use specialized, elaborate patterns of language. The most obvious is the language of the law, as it appears in courtroom examinations, jury instructions, legal opinions and briefs. This type of language has its own rules and patterns, which are very interesting. And the people who are familiar with these patterns, using them in legal contexts, are demonstrably in positions of power. There are many other examples of professional situations in which the professional is dominant and the client is subordinate, even suppliant. In many cases power is maintained partly through the use of specialized and technical language and partly through general mechanisms of conversational control. Study of language in structured situations therefore encompasses both specialized language and patterns of control that are in a sense known to everyone. In some areas misuse of powerful language to control has become notorious: the medical and other helping professions are cases in point.

3. Approaches to Language The study of language use advocated here is based on rhetorical and pragmatic analysis. Rhetoric and pragmatics are basic tools for the discovery and assessment of significant patterns of use.

Rhetorical analysis in the widest sense is concerned with the explicit and implicit meanings of discourse. It therefore includes all the elements of sentences and their combinations, that contribute to such meanings. In the strongest rhetorical approach (a view consistent with the approach suggested here) form contributes to meaning in an essential manner. Monroe Beardsley's short essay "Style and Good Style" is a useful introduction to the view that form is meaning, and to the notions of implicit and explicit meaning.

Word meaning involves denotation and connotation; the latter covers such areas as emotional color, negative and positive weight, contextual associations. These notions are basic to the close analysis of language. Stereotypes and euphemisms probably need special consideration; cf Walter Lippman's Public Opinion, Gordon Allport's essays.

Precise and concrete words can be contrasted with vague and abstract words . Both play very important roles in persuasion: words with clear meanings and connotations require a clear message and a relatively active participating audience, while vague and abstract words can convey vague messages, keying into a relatively passive audience's private myths and symbols, and to those prevalent in the culture. It is almost a commonplace that the evocative be persuasive; remote and abstract language is also persuasive, in a rather different way. As Orwell emphasises in "Politics and the English Language," there is an important sense in which abstractions are further from their actual denotations than are concrete words. Because of this they are particularly susceptible to vague and idiosyncratic interpretation, and to misuse. Hayakawa's Language in Thought and Action has a useful discussion of this point.

Some knowledge of sentence structure is required to find and understand rhetorical effects such as the placement of important and unimportant material. Students should be able to detect parallelism and other types of repetition at the level of word and sentence. Metaphor, irony and satire, hyperbole, litotes and other tropes are used frequently in persuasive language. Rhyme, assonance, and poetic effects in which sound and meaning are brought together in a non-arbitrary way can produce important rhetorical effects; they appear of course in persuasive language of all kinds, from Kennedy's first inaugural speech to the jingles of political and product advertising.

Pragmatic analysis deals with the way people generally understand each other in communication; with conventional and conversational implicature, the role of context and discourse type in interaction. There are standard patterns of implication that people tacitly assume when talking to each other; the same patterns are assumed, and often played on, in persuasion. For example, if I offer to give you $5 if you sing *La Marseillaise*, you are likely to understand that I will not give you the $5 if you do not sing it. Yet it would not be inconsistent with what I said if you did not sing and I gave you $5. Persuasion often depends on standard assumptions and unstated implications. Grice, Levinson's text Pragmatics , parts of Sperber & Wilson's Relevance, Gordon & Lakoff's "Conversational Postulates" contain useful discussions of implications, and of communication.

Some understanding of the communicative and social mechanisms involved in language use is relevant for the study of language in power and persuasion. For instance, powerful people control conversation. They do this by such means as talking more than others, interrupting, and by controlling the topics of the conversation.

It is essential to emphasize the symbolic nature of language in discussing how it functions in public (and private) life. Murray Edelman's The Symbolic Uses of Politics , especially the chapters on language, gives an excellent presentation of this approach to the use of language in the political domain. Edelman gives a useful 4-way typology of political language according to its function: hortatory, administrative, legal, negotiating. From a very different point of view, Evelyn Waugh's novel The Loved One presents a satirical cautionary tale based in part on people's failure to understand the nature of symbolic action.

4. Topics This is a list of possible topics, with some unsystematic suggestions for readings. I do not include readings on rhetorical or pragmatic topics.

Hortatory language: political arguments, tracts, and other attempts to convince an audience to adopt a particular view and to follow a particular course of action. Reading may include classics such as Milton's "Areopagitica," Swift's "A Modest Proposal," Marx and Engels' "The Communist Manifesto," Tom Paine's "Crisis," Thoreau's "On Civil Disobedience." Speeches of orators such as Churchill, Roosevelt, John F. Kennedy may be included, including the ceremonial and the more pointed addresses. The speeches of modern presidents, senators, candidates are very much worthy studying; they are a natural way of approaching questions about the mass media and modern political life. Roderick Hart's Verbal Style and the Presidency has excellent analyses and interpretations of presidential speeches from Truman to Reagan. His discussion of Reagan is very interesting.

Patterns of argumentation. Deductive and inductive reasoning. Knowledge of the basic patterns of reasoning is essential for studying argumentation and assessing different presentations of arguments. This connection between persuasion and reasoning is a strong example of how the broad study of persuasion involves topics that are important in a general education. People need to be able to recognize valid inferences, and to be able to distinguish between validity and truth in reasoning. The study of presentation might include the persuasive power of omission and non sequitors. Toulmin's model of practical reasoning gives another approach that is quite useful; Toulmin's model is intended to present the structure of claims and arguments that do not fit the classic models.

Propaganda. In the study of propaganda one encounters the controlled use of language and other modes to shape and persuade. Propaganda has played an important role in modern war and in modern political and social life. The first propaganda campaigns occurred in England and the United States in World War I. One might set up a continuum of propaganda according to how absolute is the central control; Hitler's Germany, Orwell's 1984 are at the most controlling end. All students of propaganda agree that control and the techniques of mass media are essential ingredients(cf Bernays; JAC Brown, Michael Choukas); they differ as to the role of ideology and deception. Propaganda campaigns can be examined for answers to the question of which are the most useful distinctions. Jacques Ellul's Propaganda discusses the role of propaganda in democracies, introduces the notion of integrative propaganda. Ellulargues that a type of propaganda that is not centrally controlled pervades mass society, through pressure towards conformity.

Language and public policy. This topic can be investigated through case studies of programs and policies; and changes in labels that have practical effects such as the definitions of homosexuality as a disease, or disorder;

rape as a relatively minor or a serious crime, etc. Edelman's Political Language discusses some important areas and cases.

Beaurocratic language. Bureaucracies tend to produce the same type of impenetrable, jargon-ridden language for themselves and for the public at large. The language is dull, abstract, full of long nominals and almost-empty verbs, lacking in rhythm. Orwell noted that such language is very effective in distancing an audience from the topic. The pattern and meaning of bureaucratic language is discussed briefly in Edelman's The Symbolic Uses of Politics. The Committee on Doublespeak of the National Council of Teachers of English publishes a newsletter of current examples. Cf recent efforts to change the language of documents, e.g. Roger Shuy's work on insurance contracts are exemplary, and Foss's NSF-funded study of document design.

Language and war. Many have pointed out that when an enemy is seen as brutal and dehumanized enemy, people find it easier to act violently toward them, and to condone such violence. A modern variant of this pattern hardly recognizes the enemy as human, treating the conduct of war as essentially a technological matter. Hitler's Mein Kampf Orwell, Aldous Huxley;Bosmajian's discussion of war; O'Neill, "War words." Discussions of the Vietnam war, nuclear war, Hilgartner et al, Nukespeak.

Advertising. There are many discussions of appeals of different types, especially appeals to emotions and attitudes. Rank's The Pitch includes a useful scheme for analyzing the claims, appeals, presentation of advertisements. Leech, English in Advertising gives many good examples of poetic language in advertising; see also the papers in di Pietro (ed), Linguistics and the Professions. Barthes Mythologies, Leo Spitzer "American advertising explained as popular art" show how advertising uses and reveals popular cultural myths. Unscrupulous claims and pseudo-logical appeals are discussed in Geis The Language of Television Advertising, Stevens, I Can Sell You Anything.

Language and subordinate groups. The names, adjectives, and other expressions used toward members of subordinate or enemy groups fall into two main patterns. Members of the target group are branded as less than human, savages (American Indians), animals (black slaves); or as childlike and dependent, without the full weight of adults (women, blacks). Haig Bosmajian's Language and Oppression; Wolfson & Manes, Language of Inequality; Farb, Word Play.

Language and women. Unique to the situation of women are limitations of linguistic choices that make them invisible; e.g. the lack of a neutral 3rd person pronoun, the generic use of masculine pronouns, the masculine names of certain professions and positions. There are many studies of words about women, striking in the aggregrate because they demonstrate that the negative value typical of such words is deeply entrenched in the lexicon. (Casey & Swift, Words and Women, the NCTE Language and Sexism.) This area of study supports strongly the claim that patterns of talk reveal patterns of thought, the weak Whorf-Sapir hypothesis. The discussion of muted groups in Cheris Kramarae, Women and Men Speaking makes the point in another way: the subordinate position of women is shown by the fact that many important experiences of women have no words in the language.

Powerless language: There is a powerless style of talk, which is very close to the stereotype of women's language. In a social and political context, then, stereotypic women's language should be seen as powerless language. This conclusion is based on evidence about the contexts in which women talk in the powerless style; and about highly structured contexts in which powerless language depends on factors other than gender. Study of this topic begins with the question, Do women talk according to the stereotype? The answer is, yes --with certain exceptions. The exceptions are interesting: contrary to the stereotype men talk more and interrupt more than women do (indicating that they are in power). Otherwise the stereotype is generally not far off. This has been established by research which, with increasing sophistication, examines the function of utterances in discourse. Early research simply counted structures of different types. There is not much difference in how many questions are asked by men and women; but they have different functions. Men's questions tend to establish control, while women's questions tend to support topics established by others. However, in structured situations such as courtrooms and police stations, people in subordinate positions stereotypic women's language, regardless of sex. In these structured situations, moreover, women in powerful positions do not speak this way. One can talk therefore of a powerful and powerless style. Research by William O'Barr, Fay Crosby is crucial here; see articles by Carole Edelsky for helpful summaries.. Brown & Levinson's theory of politeness is useful in explaining the characteristics of powerless language in a principled manner.

Language and the professions. Social scientists have begun to study how professionals use language to control and to enhance their own power. The most obvious situation is the professional interview, but the field is widening to include technical professions such as neuroscience, engineering, in which interviews play little or no role. The human services professions, including medicine, therapy, education, are most often discussed. See Di Pietro(ed), Linguistics and the Professions. Fowler et al.(eds)Language and Control. ; Labov and Fanshel, Therapeutic discourse.;Fisher and Todd (eds), The Social Organization of Doctor Patient Communication; Alatis and Tucker (eds), Language in Public Life. The approach is more historical in Hudson The Jargon of the Professions. JoAnne Browne, "Professional Language: words that succeed" in Radical History Review (1986). Law is the most-studied professional area. See Charrow and Charrow on the language of jury instructions; O'Barr's Linguistic Evidence: Language, Power and Strategy in the Courtroom. The classic in the analysis of legal language is Mellinkoff, The Language of the Law. James White, The Legal Imagination, discusses legal thought and expression. Journals such as Text, Language in Society, Discourse Processes, Journal of Pragmatics frequently print articles on relevant topics.

Barthes, Roland. *Mythologies*.

Bosmajian, Haig. *Language and Oppression*.

Edelman, Murray. *The Symbolic Uses of Politics*. *Political Language*.

Ellul, Jacques. *Propaganda*.

Geis, Michael. *The Language of Television Advertising*.

Hart, Roderick. *Verbal Style and the Presidency*.

Hayakawa, S. I. *Language in Thought and Action*.

Hilgartner, Stephen, Richard Bell, and O'Connor. *Nukespeak*.

Kramarae, Cheris, M. Schulz, W. O'Barr (eds). *Women and Men Speaking*.

Lakoff, George & Mark Johnson. *Metaphors We Live By*.

Lippman, Walter. *Public Opinion*.

Mellinkoff, David. *The Language of the Law*.

Miller, Casey & Kate Swift. *Words and Women*.

O'Barr, William. *Linguistic Evidence: Language, Power, & Strategy in the Courtroom*.

Orwell, George. *The Orwell Reader*.

Rank, Hugh. *The Pep Talk: How to Analyze Political Language*.

Stevens, Paul. *I Can Sell You Anything*.

& readings from original sources, e.g. Swift, A Modest Proposal; Hitler, Mein Kampf; speeches of Roosevelt, Churchill.

Title	**Language Planning**
Level	Recommended: Introduction to Linguistics. Open to graduate students
Description	This course provides an opportunity for students to learn about international language planning from a sociolinguistic perspective. In this connection, it examines the interaction between official and indigenous languages as well as the role of minority groups in national policymaking. It also highlights language as a cultural, political, and social marker.
Required Readings	Text:Schweda-Nicholson, Nancy, ed. 1986. Languages in the International Perspective. Norwood, NJ: Ablex. Additional articles taken from Language Problems and Language Planning, Language Monthly, The Linguist, AILA Review, and other journals and official government language policy documents.
Syllabus	Language Policy and Global Interdependence Role of Arabic Language Academies in Language Plannning ESL Programs for Immigrants in Canada Movement to Include Kiswahili in the OAU Foreign Language Broadcasting by World Powers Interface Between Quechua and Spanish in Ecuador Court Interpreters Act of 1978 and Language Policy Development in Interpretation for Non-English Speakers in the American Judicial System Language Planning for Education in Niger Writing System Reform in Turkey
Requirements	Midterm, oral report, research paper, class participation, final exam.
Source	University of Delaware Instructor: Robert Di Pietro

from the Ann Arbor case." Journal of Reading; 24: 150-54.

BILINGUALISM

Acosta, Teresa. 1987. "A nation of many pasts, faces." USA Today; 13 (February): 12A.

Alatis, James. 1978. International Dimensions of Bilingual Education: Georgetown University Roundtable on Language and Linguistics. Washington, DC: Georgetown U Press.

Bowen, James and Jacob Ornstein. 1976. Studies in Southwest Spanish. Rowley, MA: Newbury House.

Diamond, Stanley. 1987. "We need laws to keep English first." USA Today; 13 (February): 12A.

Elias-Olivares, Lucia, ed. 1983. Spanish in the U.S. Setting: Beyond the Southwest. Rosslyn, VA: National Clearinghouse for Bilingual Education.

Engrossed Assembly Substitute Amendment 1 to 1975 Senate Bill #126, State of Wisconsin (LRB-9630/1).

Fishman, Joshua. 1980. "Language policy: Past, present, and future." In Charles Ferguson and Shirley Heath, eds., Language in the USA. New York, NY: Cambridge U Press.

Fernandez, Roberto. 1983. "English loan-words in Miami Cuban Spanish." American Speech; 58: 13-19.

Henry, William. 1983. "Against a confusion of tongues." Time; 121 (June).

Hernandez, Antonia. 1987. Don't enact these discriminatory laws." USA Today; 13 (February): 12A.

Kjolseth, Rolf. 1972. "Bilingual education in the United States: For assimilation or pluralism?" In Bernard Spolsky, ed., The Language Education of Minority Children. Rowley, MA: Newbury House. pp. 94-121.

"Losing Control of the Borders." 1983. Time; 121 (June).

Macias, Reynaldo. 1979. "Language choice and human rights in the United States." In James Alatis and G. Richard Tucker, eds., Language in Public Life: Georgetown University Roundtable on Language and Linguistics. Washington, DC: Georgetown U Press. pp. 86-101.

Madsen, William. 1973. The Mexican-Americans of South Texas. 2nd ed. New York, NY: Holt, Rinehart & Winston.

Nash, Rose. 1970. "Spanglish: Language contact in Puerto Rico." American Speech; 45: 223-33.

----------. 1971. "Englanol: More language contact in Puerto Rico." American Speech; 46: 106-22.

"The New Ellis Island." 1983. Time; 121 (June).

Omicinski, John. 1987. "Language laws a recipe for trouble." USA Today; 13 (February): 12A.

Swanson, Maria. "Bilingual education: The national perspective." In Gilbert Jarvis, ed., ACTFL Review 5: Responding to New Realities. Skokie, IL: National Textbook.

Thompson, Roger. 1975. "Mexican-American English: Social correlates of regional pronunciation." American Speech; 50: 18-24.

Tonnesen, Thomas. (In Press). Ethnicity and Public Policy: Language.

"U.S. English" (brochure).

"We don't need laws to put English first." 1987. USA Today; 13 (February): 12A.

Syllabus This is a case-study course with introductory lectures by the instructor. Students will then form discussion groups. One member from each group will report on the group discussion when the entire class again meets.

Requirements	Two essay question exams
Source	University of Wisconsin-Green Bay Instructor: Donald W. Larmouth

Title **Language Typology & Language Universals**

Level Graduate/undergraduate. Prerequisites are junior standing and Fundamentals of Linguistic Analysis, but for language majors the course prerequisite will be waived.

Syllabus This course has to do with the grammatical structure of human languages. Discussions will focus on determining which grammatical characteristics are unique to a given language and which are not in that they recur in more than one language and, possibly, in all human languages.

Roughly two-thirds of the semester will be spent discussing these questions on a general level. The remainder will be devoted to the analysis of some of the major languages of the world in order to determine which of their grammatical features are specific to them and which of them are universal.

Required Reading Text: Greenberg, Joseph H. 1966. Language Universals. The Hague: Mouton.

Suggested Readings

Eckman, Fred R. 1977. Current Themes in Linguistics: Bilingualism, Experimental Linguistics, and Language Typologies. Washington, DC: Hemisphere.

Greenberg, Joseph H., ed. 1966. Universals of Language. Cambridge, MA: MIT Press.

Greenberg, Joseph H., ed. Universals of Human Language. Volumes I, II, III, IV. Stanford, CA: Stanford U Press.

Li, Charles., ed. 1976. Subject and Topic. New York, NY: Academic Press.

Ruhlen, Merritt. 1976. A Guide to the Languages of the World.

Voegelin, C.F. and F.M. Voegelin. 1977. Classification and Index of the World's Languages. New York, NY: Elsevier.

Syllabus

Introduction
Lexical Typologies
Syntactic Typologies
Phonological Typologies
Markedness Theory

Requirements Three tests, one paper, class participation.

Source University of Wisconsin-Milwaukee
Instructor: Edith Moravcsik

Title	**The Languages of Science Fiction and Fantasy**
Description	The course investigates the kinds of languages appearing in speculative fiction to determine how they function in their worlds, and compares and contrasts them with what we know about real languages in the real world. The subject will be examined through various aspects of language, in fiction, and in reality.
Required Readings	Texts: Bester, Alfred. The Computer Connection. Burgess, Anthony. A Clockwork Orange. Delany, Samuel R. Babel-17. LeGuin, Ursula K. A Wizard of Earthsea. Orwell, George. 1984. Tolkien, J.R.R. The Lord of the Rings.
Suggested Readings	Clement, Hal. Cycle of Fire. Laumer, Keith. Envoy to New Worlds. Silverberg, Robert, ed. The Science Fiction Bestiary. Simak, Clifford D. City. Vance, Jack. The Languages of Pao.
Syllabus	Language and Non-Humans The Origin of Language The Nature of Language Language Change, Pidgins, and Creoles Language and Thought The Limits of Change
Requirements	Three essay tests, one short paper.
Source	University of Wisconsin-Milwaukee Instructor: Barbara Wheatley

Title **Languages of the World**

Level Prerequisite: Introduction to Linguistics

Description This course is conceived for students who wish to learn about some distinctive characteristics of various languages of the world, but do not wish to major in linguistics. As any other linguistics course, its ultimate goal remains to understand how verbal language works from both a formal and a social perspective. We will focus on linguistic diversity from the typological points of view of how the structures of the different language varieties and the principles governing their use vary cross-culturally.

Because most of the students will not be linguistics majors, we will concentrate more on the functional aspects of the morphosyntactic categories of the languages covered rather than on their formal descriptions. The areas of discussion will include the following: "tense" and "aspect" (as linguistic devices for expressing time); "mood" (as a linguistic device to communicate the speaker's attitude toward what he is relating); "number" (e.g., how the meaning of "plurality" varies from one culture/language variety to another; differences between singulative and classifying systems); incorporation of gender/sex distinctions in language and their association with sexism, organization of the universe of personal pronouns (significance of sex, inclusion/exclusion, lineage distinctions); usage of honorifics/titles and of (first) names and different conventions for allocating social status and establishing social distance or for communicating respect/deference and many others.

Languages will be selected in terms of how they illustrate any of the above properties best. They will certainly include 1) "native Englishes"; 2) pidgins/creoles; and 3) English, French, Spanish, German, Russian, and other relevant languages.

Required Reading

Shopen, Timothy, ed. 1979a. Languages and Their Speakers.
____________________. 1979b. Languages and Their Status.

Syllabus

Formal Structure of Verbal Language 1: Vocabulary/Syntax
Formal Structure of Verbal Language 2: Phonology/Morphology/Syntax/Semantics
The Meaning of "Knowing a Language": Sociolinguistics/Pragmatics
Language Classification: Genetic/Typological
Vocabularies as Cataloguing Systems.
Different Address Systems and Usage of Honorifics.
Pronomial Systems.
Gender.
Number Delimitation.
Tense, Aspect and Mood.
Syntactic Types

Requirements Written project, class participation, midterm.

Source University of Georgia
Instructor: Salikoko S. Mufwene

INNOVATIONS IN LINGUISTICS EDUCATION 1.2 (1980), 25-52.

LANGUAGES OF THE WORLD: A SEMI-INDIVIDUALIZED INTRODUCTORY LINGUISTICS COURSE*

by

Alice Faber
and
Hatte R. Blejer

The University of Texas at Austin

Introduction

During the Spring of 1979, four sections of Linguistics 306, a freshman level Introduction to the Study of Language, for non-majors, at the University of Texas, were devoted to 'Languages of the World'. The topic was repeated for one section in Summer 1979 and two sections in Fall 1979, and three additional sections, including one honors section, were 'variations on the theme'. These sections are generally staffed by Assistant Instructors (advanced graduate students), although regular faculty members do sometimes teach the course. Each section has a Teaching Assistant attached to it. The average class size is 30 students; classes meet for three hours a week.

Each student who was enrolled in a 'Languages of the World' section selected a language/nation pair from an extensive sign-up sheet[1]. Throughout the semester, assignments were given in which students answered questions about their language and/or country. Grades on these 'notebook' assignments contributed heavily to the students' grades for the course.

Our motivation in designing the course was simply that most of our students had been taking Linguistics 306 to fill a distribution requirement in Social Sciences or Communication Skills. Most have little interest in the synchronic and diachronic language study traditionally taught in introductory Linguistics courses. The majority of these students will never take another Linguistics course; thus, an in-depth introduction to linguistic analysis would not serve their needs. On the other hand, a certain subset of our students WILL continue to take Linguistics courses. Some of these are 'major-shopping'; others are taking a four or five-semester sequence in Linguistics as a substitute for a foreign language requirement. These students need to be given a realistic idea of what to expect in upper division Linguistics courses.

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*We would like to thank Marianna DiPaolo and Susan Schmerling for their comments on an earlier draft of this paper. We would also like to thank our students for their patience in bearing with our 'experiment', and our assistants, James [illegible]ranfill, Charles Kirkpatrick, David Ladyman, and Douglas Thomas, for their help in making the course successful. Thanks are also due to our supervisor, Robert Wall, for encouraging us to experiment.

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We felt that we could best serve BOTH groups of students by asking each student to master details about one language structure (other than English), and to examine the extent of social and regional variation, or multilingualism, in one country. Through class discussions following each notebook assignment, students would be made aware of the extent of variation among languages in case systems, consonant inventories and literacy rates, etc. Students were expected to give short presentations concerning interesting aspects of their languages.

Many of the students who take Linguistics 306 as a substitute for a foreign language do so because of a previous unsatisfactory experience in a foreign language course in high school or college. As a consequence of their unfortunate experiences, these students are often pessimistic about their abilities to acquire a foreign language, and sometimes scornful of any aspect of another language or culture. Thus, in previous semesters, linguistic examples drawn from other languages had frequently been met with guffaws, disinterest, or disbelief. We hoped that, in developing an interest in and knowledge of some other language and/or country, our students would become more confident of their own abilities to cope with other languages and cultures and less intolerant of anything foreign.

We had initially expected two groups of students to be especially attracted by the format of our course: students who had for whatever reason been fascinated by a given language or country, and students who are preparing for careers that will take them overseas or bring them into contact with other cultures. Included in the first group were students who grew up overseas because their parents were in the military. Included in the second group were students majoring in such areas as International Business or Petroleum Land Management.

In addition to the above two groups of students, we encountered a third group, larger than either of the other two. These are students who took advantage of the extended series of assignments to investigate their linguistic and cultural roots. The following languages have been selected by at least one roots-seeker: Yiddish, Chipewa, Flemish, Italian, Irish, Norwegian, Czech, Spanish, Korean, Nahuatl, Hebrew, German, Swedish, Yoruba and Greek.

Course Structure

All sections of 'Languages of the World' have covered most of the topics in Fromkin and Rodman, *An Introduction to Language*, second edition. The order in which topics are covered was changed slightly to match the order of the notebook assignments. In addition, all sections were quizzed at intervals and completed five or six problem sets; the notebook assignments took the place of major projects like term papers. At no point did we test the students on the notebook assignments.

Summary of the Notebook Assignments

Below are summarized the notebook assignments that we used. The complete texts of the assignments are given in Appendix B.

1. Background and Writing System: Where the language is spoken and by whom; how, if at all, it is written.

2. Phonology: preparation of consonant and vowel charts for the language, highlighting systematic differences between it and English.

3. Morphology: morphological categories (case, gender, tense, etc.) and their expression in the language; in general, the complexity of the morphology.

4. Word order typology: the relative orders of major sentence constituents in the language.

5. Meaning: investigation of one of the following—kinship/color terminology, the Whorfian hypothesis, or formal/informal pronominal address/reference systems.

6. Sociolinguistics: Investigation of one of the following: the extent and degree of government encouragement and/or tolerance of bilingualism, or factors influencing the growth of a standard language in the country.

7. Grab-bag: Investigation of one of the following: the history of literature in the language, the extent of dialect variation in the country, the rate of literacy in the country, the development of the language as a pidgin/creole, and the status of the language *vis-à-vis* other major languages in the country.

The assignments that we gave are appropriate in level and depth to a lower division one-semester introductory course. The specific assignments used in an upper division or two semester course would presumably be adjusted to the depth at which topics are normally covered in such a course.

Language Selection

Before the first semester began, we prepared an extensive list of language/nation pairs and determined the maximum number of students we would allow to work on each pair. This maximum was based on our assessment of how much material would be available in the University of Texas libraries on a given language or nation; instructors at other institutions may need to vary the list to suit the strengths of their research libraries.

Since one purpose of the assignments was to broaden the students' linguistic horizons, we discouraged them from selecting English and the commonly taught western languages. If a student selected a language for which there was little useful material available (e.g., some Amerindian languages, Celtic languages, Dutch, Afrikaans, Korean), we consulted with him/her early in the semester about research tactics, and throughout the semester as difficulties arose. We especially encouraged students to consult with 'experts' in their languages, including graduate students and faculty in Linguistics and foreign language departments. In grading the assignments, we considered difficulties the students were having finding material so that no student would be penalized for having chosen a 'difficult' language.

It is impossible to predict in advance which languages will cause difficulties. In some cases, the difficulties can be avoided only if the student has a reading knowledge of French or Spanish. Consequently, the instructor must be sensitive to the problems that students may have and must seek to differentiate inadequate jobs resulting from laziness on the students' part from inadequate jobs resulting from lack of material.

Library Orientation

Many of our students are not familiar with the University of Texas library system, and are inadequately prepared to do library research using primary sources. One of the goals of this course was to provide them with basic research skills. Therefore, we arranged with the Special Services Department of the University of Texas General Libraries to provide our students with orientation to the Perry-Castaneda (central) library. The library staff prepared a bibliographic handout listing general handbooks about languages and language families, sources of statistical information, and general linguistics bibliographies.[2] In addition, during the first week of classes, all students were required to take a tour of the library, which introduced them to United Nations statistical publications, Statistical Abstracts from around the world, US government documents, ERIC indices and the Human Relations Area Files. This orientation showed the students potential sources for their assignments, as well as demystifying the library for them; PCL is the largest open stack library in the United States.

General Problems

Most of the problems encountered in teaching this course can be avoided if the instructor anticipates the difficulties that students will have in researching a particular language/country pair. The instructor should arrange to consult with students about bibliography early in the semester. If the instructor allows the students to choose among several alternative topics for a given assignment, he/she should indicate to the students which topic is most appropriate for a given language/country. Many students in an introductory Linguistics course are unable to evaluate the quality of the source material that they locate. We found that it was helpful to have students bring books that they found to us so that we could help them in this evaluation. We sometimes found it necessary to accompany students to the library, if for no other reason than to recall books that were checked out to faculty members. In general, we found that the more individual consultation we were willing to provide the students with, the more satisfactory the course experience was for them.

Student Performance

In terms of student performance, the Languages of the World format was an unqualified success. Because such a large portion of the class grade was based on a reasonably well-spaced series of assignments rather than on one large assignment like a term paper, students could not defer their work until the last week of the semester. Therefore, student performance was more consistent and consequently better than in our classes in previous semesters. Although the total amount of time spent on the seven notebook assignments is probably comparable to that spent researching and writing a good five-to-ten-page term paper, the fragmented nature of the assignment was easier for the students to deal with, and a much higher number of them than we had anticipated did truly outstanding jobs. Consequently, the overall grades in the course were high.

Furthermore, students with a special interest in a particular language and/or country were motivated to excel on all of the notebook assignments. And, in most instances, even students who had simply picked a particular language/country pair because no one else had picked it yet exhibited increasing enthusiasm during the course of the semester. Finally, we feel that student performance in all aspects of this introductory Linguistics course was better because each student was able to apply newly acquired linguistic concepts to his/her own language.

Student Response

In general, student response to the Languages of the World assignments was positive. Some students felt that too much work was required for an elective course. However, even though a few students were initially intimidated by the idea of working with a foreign language, most students remarked that the notebook assignments were a 'valuable learning experience'. Here are some of the comments we received on our Course-Instructor Survey forms:

> "I enjoyed doing the notebook because it gave insights into other languages besides English and also made me more aware of differences and similarities between languages."
>
> "The projects were very educational. The third project [morphology] was the most difficult. The fourth project [syntax and word order] was interesting..."
>
> "The Research Project was especially valuable because I learned how to use the UT library system. Before this class I had never walked in a library on campus."
>
> "I totally enjoyed the language assignment. I feel that I have REALLY learned something—not just from reading chapters and memorizing but a language! That's great!"

For two sections, a multiple choice question concerning the assignments was included on the questionnaire: "I found the notebook assignments were rewarding." The responses were as follows:

Definitely agree	5
Agree	10
No opinion	5
Disagree	3
Definitely Disagree	2.

APPENDIX A: Language/Country Pairs

(An * next to a language indicates that at least some students had difficulty finding adequate material in English for that language.)

SPANISH—Puerto Rico, Southwestern United States, Cuba, Spain, Peru, Mexico, Paraguay, Guatemala, Philippines.

GERMAN—United States (Pennsylvania Dutch and Texas), Switzerland, Germany.

FRENCH—France, Canada, Cameroon, Algeria, Morocco, Tunisia, Lebanon, Haiti, Belgium, Senegal, Switzerland, Zaire.

ENGLISH—United States, Great Britain, India, Republic of South Africa, Australia/New Zealand, Canada, Ireland, Kenya, Jamaica.

*YIDDISH——United States, Israel, Argentina, USSR.

*DUTCH——Netherlands.

FLEMISH—Belgium.

*AFRIKAANS—Republic of South Africa.

ITALIAN—Italy, Argentina, Switzerland.

PORTUGUESE—Portugal, Brazil.

RUMANIAN—Rumanian.

ARABIC—Algeria, Morocco, Tunisia, Libya, Egypt, Sudan, Lebanon, Syria, Jordan Israel, Iraq, Saudi Arabia, Gulf States.

CATALAN—Spain.

PROVENÇAL—France.

BASQUE—Spain, France.

ROMANY—England.

AMHARIC—Ethiopia.

HEBREW—Israel.

*BERBER—Algeria, Morocco.

Appendix A

HAUSA—Nigeria.

GALLA—Ethiopia.

SOMALI—Somalia.

SWAHILI—Kenya, Tanzania.

KHOSA(XHOSA)—Republic of South Africa.

DINKA—Sudan.

KRIO—Sierra Leone.

DANISH—Denmark.

FINNISH—Finland.

WELSH—Great Britain.

*GREEK—Greece, Cyprus.

POLISH—Poland.

*CZECH—Czechoslovakia.

SERBO-CROATIAN—Yugoslavia.

RUSSIAN—USSR.

UKRAINIAN—USSR.

GEORGIAN—USSR.

ARMENIAN—USSR.

ALBANIAN—Albania.

PERSIAN—Iran.

HUNGARIAN—Hungary.

*SCOTS GAELIC—Great Britain.

*BRETON—France.

*IRISH—Ireland.

NORWEGIAN—Norway.

PASHTO—Afghanistan.

KURDISH—Iran, Iraq, USSR.

GUJARATI—India.

LITHUANIAN—USSR.

ESTONIAN—USSR.

LAPP—Finland.

BULGARIAN—Bulgaria.

ZULU—Republic of South Africa.

LUO—Kenya, Tanzania.

SWEDISH—Sweden.

HINDI—India.

IGBO(IBO)—Nigeria.

TUPI—Brazil.

*QUECHUA—Bolivia, Peru.

GUARANI—Paraguay.

*NAHUATL—Mexico.

SRANAN—Surinam.

PAPAMIENTO—Curaçao.

HAITIAN CREOLE—Haiti.

ESKIMO—Greenland (Denmark).

ALEUT—United States, USSR.

*NAVAHO—United States.

*HOPI—United States.

Appendix A

AYMARA—Bolivia.

CARIB—Brazil.

PILIPINO—Philippines.

TAGALOG—Philippines.

KHMER—Cambodia.

VIETNAMESE—Vietnam, United States.

MUONG—Vietnam.

THAI—Thailand.

LAO—Laos.

BURMESE—Burma.

MALAY—Malaysia.

BAHASA INDONESIAN—Indonesia.

MACEDONIAN—Greece.

NEO-ARAMAIC—Israel, Syria, Iraq.

NEPALI—Nepal.

TURKISH—Turkey, Cyprus.

(LU)GANDA—Uganda.

BAMBARA—Senegal.

FULANI—Senegal, Nigeria.

CHICHEWA—Malawi.

WOLOF—Senegal, Gambia.

YORUBA—Nigeria.

MALTESE—Malta.

SAMOYED—USSR.

TELUGU—India.

MAYALAYAM—India.

CEBUANO—Philippines.

MAORI—New Zealand.

ILOCANO—Philippines.

HAWAIIAN—United States.

GILBERTESE—Gilbert Islands.

JAPANESE—Japan.

CHINESE—China, Taiwan.

*KOREAN—Korea

OSSETIC—USSR.

BALUCHI—Iran, Afghanistan.

AZERBAIJANI—USSR, Iran.

SINHALESE—Sri Lanka (Ceylon).

TAMIL—India.

KANNADA—India.

In addition to these language/country pairs, students were allowed to select pairs not listed. So, for instance, a student who had grown up in a town with Seneca speakers chose to research Seneca/United States, and a student who had been in the Navy on Guam decided she wanted to learn about a language which she had come into contact with there, Chamorro.

APPENDIX B:

Notebook Assignments and Bibliography

General Bibliography

(Those items that were listed on the Library Orientation handout are marked with an *. The annotations accompanying those items are taken from the handout. Although the general bibliography was especially helpful for Notebook #1, it was also useful for other notebook assignments.)

*Giliarevskii, Rudzhers Sergeevich. 1970. *Language Identification Guide.* Moscow: Nauka Publication House.
"Over 225 languages are discussed here, and for each language the alphabet is provided, as is a quotation (untranslated) and short descriptive comments on the language and speakers."

*Katzner, Kenneth. 1975. *The Languages of the World.* New York: Funk & Wagnalls.
"This entertaining and very readable guide is arranged in three sections. The first consists of broad essays concerning the major language families of the world. The second is composed of descriptive articles on nearly 200 languages, with each article containing a quotation (with translation) from the language. The third section is a country by country survey, which provides basic information on languages spoken in various lands. An index of languages and language families is provided."

*Nida, Eugene Albert. 1972. *The Book of a Thousand Tongues*, rev. ed. London: United Bible Societies.
"This book contains entries for 1,339 languages and dialects into which some part of the Bible has been translated. Each entry includes a quotation from the Bible in the appropriate language and a brief description of the language's speakers."

Ruhlen, Merritt. 1975. *A Guide to the Languages of the World.* Palo Alto: Stanford University Language Universals Project.

*United Nations Education, Scientific and Cultural Organization. 1963-. *Statistical Yearbook.* Paris.
"Statistics which are supplied for some 200 countries and territories of the world include: population figures, illiteracy rates, educational attainment of the population, and educational enrollments and expenditures..."

*Voegelin, C. F. and F. M. Voegelin. 1977. *Classification and Index of the World's Languages.* New York: Elsevier.

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"Articles for broad language groupings and language families are arranged alphabetically. Each article provides a brief description of the grouping, including information regarding the number and localities of speakers, and listings of the various language members of the group. There is an index for names of groups, subgroups, individual languages, dialects and tribes. Obviously, this volume is of great value in determining language relationships and affiliations."

Appendix B

Notebook #1

Determine the following information about your language:

1. In what countries is it spoken, besides your country?
2. How many speakers does it have in your country? In other countries?
3. Is it a majority or a minority language? Does it have official status?
4. Is it written? Is it taught in the schools? If so, is it taught to everyone, or only to a minority? Are schools conducted in it?
5. To what extent does it have a literature? Is it a folk literature? Are newspapers published in your language in your country?
6. What other languages is your language related to?

Now, focus on the writing system of your language. Answer ONE of the following questions:

1. If your language is not written, try to find out why not. Is there some other language that is regularly used in your country? Is the government actively trying to suppress the language? If the government is trying to encourage literacy in your language, how much success is the program having? What factors are influencing the program? Are there any outside groups (e.g. Peace Corps, missionaries) helping?

2. If you are doing English, discuss Noah Webster and his influence on American English spelling. How does the spelling of American English differ from that of British English? Give lots of examples. ALTERNATIVELY, you may discuss the Initial Teaching Alphabet and other attempts to facilitate the teaching of reading by using a 'simplified' alphabet.

3. If your language is written in substantially the Latin alphabet, how does the writing system differ from that of English? Are there any letters used for writing your language that English doesn't have? Does English have any 'extra' letters? What kinds of diacritics does the language use to extend the inventory of symbols? Do all of the letters stand for the same sound as in English? Give a complete listing in 'alphabetical' order. Where in the order are the extra symbols added?

4. If your language is ordinarily written in something other than the Latin alphabet, where did the symbols come from? Is there any relationship between your writing system and the Latin alphabet? If so, what? What kind of writing system is it (alphabetic, consonantal, ideographic, syllabic)? If you have problems deciding, discuss the problems. If it's feasible (if you can do it in less than one page) give a listing of all the symbols. If not, give a reasonable sampling, say, the symbols needed to write your name. In any case, make sure that you

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indicate approximately what sound each symbol represents.

If there is more than one writing system used for your language in the same country, discuss the differences. Is one considered simpler than the other? Does one have unfortunate political connotations that cause the government to want to suppress it? Do the differences correspond to ethnic differences in the population?

Appendix B

Notebook #2

Your first concern for this notebook assignment will be to locate a GOOD, UP-TO-DATE source which describes the sounds of your language. This source can be an elementary textbook, a grammar, or a bilingual dictionary of your language. Some of you may have trouble locating such a source. You may need to find, instead, journal articles describing your language, or, perhaps, chapters from an anthology of articles on languages of your language family or geographical area.

1. List the sounds of your language.

2. Give a description of these sounds, as given in your source, e.g. *a* as in 'father', a low, back unrounded vowel. To do this, you may need to use a dictionary, or even a dictionary of linguistics terminology. For every term that you mention that has not been discussed in class, you should give a definition that shows that you understand the use of the term in your source.

3. To the extent that it is possible, interpret the descriptions your source gives in the light of the terms we have used in class and those given in your textbook. So, for instance, 'spirant' = 'fricative'.

4. If applicable, comment on the adequacy of the descriptions given by your source. Some of you will find sophisticated, even overly technical linguistic descriptions; others will find your sources naive and not detailed enough.

5. Make a chart of the sounds of your language based on those given in class and in your textbook. Make sure you indicate which of the stops and fricatives are voiced and which are voiceless. You may need some different categories for your language; for instance, many of you will find that *n*, *t*, *d*, *s*, *z*, *l* (and maybe *r*) are dental rather than alveolar. Similarly, the vast majority of languages will not have an *r* resembling *r* in English. If you have to guess about how to categorize a given sound, justify your guess based on the description that your source gives. This explanation, if needed, should be included in your write-up.

6. Make sure to include a bibliography.

Notebook #3

You will need a handbook or grammar of your language; a dictionary is not enough for this project. A grammar with chapters on various parts of speech with illustrations from the language is the best source.

Give examples from your language of as many of the following types of phenomena as you can locate in your source. (For some of these categories there may be no equivalent in your language.) You must also include English glosses.

1. Give examples of definite article/indefinite article and an accompanying noun. E.g.,

definite: *the boy*   indefinite: *an apple*, *a boy*

If your language differs from English in any way describe the difference; e.g., article and noun written as one word, article has allomorphs, different definite or indefinite articles depending on noun class or some other factor, article changes depending on number (singular/dual/plural), or gender (masculine/feminine/neuter).

2. Give examples of how your language expresses different tenses. If your source also discusses ASPECT, you should also give examples. E.g.,

present: *he walks*, *he is walking*
past: *he walked*
future: *he will walk*, *he is going to walk.*

3. Give examples of noun classes in your language; that is, are nouns divided into categories of gender or some other type of division? Is the division arbitrary, or is it based on innate attributes of the noun, e.g. inanimate versus animate? Give some plural examples too; are the same categories maintained in the plural? [Those of you doing Swahili and Amerindian languages should be on the lookout for noun classes which are not based on gender but on other features. Most of you with Indo-European languages will find that gender is the basis for your noun classes.] E.g.,

Hebrew:	*talmid*	*talmida*	*talmidim*	*talmidot*
GLOSS:	'student' (m.)	'student' (f.)	'students' (m. pl.)	'students' (f. pl.)

4. If your language does have noun classes, do other parts of speech AGREE with the noun classes, e.g. adjectives, articles, demonstratives, numbers, etc.? Give examples. Is the agreement maintained in the plural? Give examples of plural (and dual if your language has it). E.g.,

Standard Arabic: *kalb jamil*
GLOSS: dog pretty   TRANSLATION: 'pretty dog (m.)'

Standard Arabic:	*kalba jamila*	
GLOSS:	dog pretty	TRANSLATION: 'pretty dog (f.)'
	kalban jamilan	
	dog pretty	'pretty dog (m. dual)'

5. Do verbs show AGREEMENT with their subject? (A few of you may also find agreement with the object—if so discuss this too. It will possibly be relevant in Amerindian.) If agreement with the subject varies according to tense and aspect, discuss this too. E.g.,

English: *he/she/it* (= 3 sg.) *walk + s*

[If your language does not show agreement with the SUBJECT but seems to behave very differently than the standard Indo-European examples on the handout and those discussed in class, you should see me to get help.]

6. What other meaning categories can be added to the verb stem, e.g. CAUSATIVE, PASSIVE, REFLEXIVE, RECIPROCAL (and possibly NEGATIVE if it's a 'bound morpheme')? Give examples. E.g.,

Amharic (SEMITIC; national language of Ethiopia):

gəddələ	'he killed'	SIMPLE MEANING
tə + gəddələ	'he was killed'	PASSIVE
ta + gəddəlu	'they killed each other'	RECIPROCAL MEANING
ləbbəsə	'he got dressed'	SIMPLE MEANING
a + ləbbəsə	'he made or caused someone else to get dressed'	CAUSATIVE MEANING

7. (A) Give examples of various prepositions plus nouns (e.g. *on, to, in, at, near*). Does the preposition cause the noun to change its form? Do different prepositions affect nouns differently? In some languages certain CASES may co-occur with particular prepositions. Does your language use CASE to express the same thing as is expressed by preposition plus noun in English? (E.g., Latin DATIVE case to express such things as *give the book TO the man*, or in some languages a special case to express LOCATIVE, such as *IN the house*.) PLEASE SEE ME SOON IF YOU ARE NOT SURE IF YOUR LANGUAGE HAS CASE OR WHAT CASE IS.

(B) If your language marks DIRECT OBJECTS in any special way, give examples.

(C) If your language uses CASES, what other cases besides those you discussed in (A) and (B) above are there? Give examples.

8. Give examples of comparatives and superlatives. For example, in English *John is bigger than me*, *JOHN* is the 'standard' (to which something is compared), and the suffix *-ER* is the 'comparative marker'; the word *THAN* serves to mark the 'object of comparison' (=*me*).

Does your language have a comparative marker? Does it have an object of comparison marker? Or is the object marked by an ordinary preposition?

Appendix B

Notebook #4

If your language is English, do this assignment for Old English.

Using a relatively recent grammar book, find examples of the following constructions in your language:

1. Do adjectives precede or follow nouns?

E.g.,	English	the	big	dog
			ADJ	NOUN

Adjectives precede nouns.

If there is any inconsistency or variation in the Adj-N order in your language, you should note it.

2. How are possessives arranged?

E.g.,	English	the	boy's	dog		
			POSSESSOR	HEAD		
	OR	the	king	of	the	gypsies
			HEAD			POSSESSOR

English has both POSS-HEAD and HEAD-POSS.

3. Does the language have prepositions or postpositions? Does it have any elements that are somehow combinations of prepositions AND postpositions? What type of word predominates?

E.g.,	English	on	the	table
		PREPOSITION		NOUN
		a week	ago	
		NOUN	POSTPOSITION	

English mostly has prepositions.

Amharic	ˀə	bet	wəst
	in	house	inside = 'inside the house'.
	PREP.	NOUN	POST.

4. What is the basic word order in a sentence? How rigid is it?

E.g.,	English	John	kissed	Mary
		SUBJECT	VERB	OBJECT

Are there any circumstances under which alternate word orders are used?

E.g.,	English	Away	ran	John	
		ADVERB	VERB	SUBJECT	
		Did	John	kiss	Mary?
		AUX	SUBJECT	VERB	OBJECT

5. How does one negate a sentence in your language?

E.g., English

John	didn't	kiss	Mary
SUBJECT	AUX-NEG	VERB	OBJECT

John	isn't	kissing	Mary
SUBJECT	AUX-NEG	VERB	OBJECT

6. DO ONE OF THESE ONLY:

(A) Does your language have auxiliary (helping) verbs or modals as separate words? If it does, do they precede or follow the verb?

E.g., English

I	have	eaten
SUBJ	AUX	VERB

John	will	eat
SUBJ	AUX	VERB

John	could	kiss	Mary
SUBJ	MODAL	VERB	OBJECT

English modals and auxiliaries precede the main verb.

(B) How does your language express yes-no questions? Is there a special word added just to show that the sentence is a question? If so, where in the sentence does this word go?

E.g., English

Did	John	go?
AUX	SUBJ	VERB

Will	John	go?
AUX	SUBJ	VERB

Add the word *do* if there isn't already an auxiliary word. Invert the AUX and the SUBJ. There is no special word, just to indicate that the sentence is a question.

(C) Does your language have a syntactic device for focusing on some noun? Other words that might be used for this in some books are TOPICALIZATION and CLEFTING. If your language has one of these devices, how is the focused noun marked, if at all?

E.g., English

It's	John	that	Mary	loves	____
	TOPIC		SUBJ	VERB	(John is somehow also the OBJECT)

This	I've	got	to	see
OBJ/TOP	SUBJ-AUX	VERB		

(D) How are relative clauses constructed in your language? Is there any remnant of the head noun within the clause? Is there any special marking either on the verb of the relative clause or on the head noun?

E.g., English	The	boy	[who	I	saw	_____]	ran away.
		HEAD	RC marker	SUBJ	VERB	(= boy)	

The relative clause follows the head noun.

If you have difficulty finding information for #1 or #2, you may substitute an additional question from #6.

Make a summary table of the word order patterns in your language:

E.g., Modern English

1. ADJ-Noun
2. Head-POSS or POSS-Head
3. Prepositions
4. SUBJ-VERB-OBJECT
5. Neg. precedes main verb
6. a. AUX-VERB
   d. Head-RC

DON'T FORGET YOUR BIBLIOGRAPHY!

Appendix B

Notebook #5

For this assignment, you will do ONE of the three questions. For each question, there are suggestions as to which languages provide interesting forms in answer to that question. It is recommended that you follow these suggestions.

1) (A) Words for members of the family are called KINSHIP TERMS. Often, kinship terms do not match from language to language.

Example One:

English	Latin
uncle	patruus 'paternal uncle' avunculus 'maternal uncle'

Example Two:

English	Tamil
son-in-law	maaple 'son-in-law, younger sister's husband'
brother-in-law	attimbeer 'older sister's husband' maccina 'wife's brother'

Find out how to express in your language AT LEAST the following kinship terms. If you have a textbook, it may have a section on family members. Otherwise, you will need a dictionary. Be sure to transcribe or transliterate the terms you cite.

TERMS:
- mother
- father
- sister
- brother
- sibling
- parent(s)
- son
- daughter
- grandmother
- grandfather
- grandchild
- uncle
- aunt
- nephew
- niece
- brother/sister-in-law
- son/daughter-in-law
- mother/father-in-law

Does your language use the same word for any two (or more) of these relationships? Does it have two or more words corresponding to the same English term? If so, what's the difference? Give examples. Does there seem to be any derivational morphology involved, that is, is the word for *sister*, for example, based on the word for *brother*? Give examples of any derivational morphology.

(B) Read Brent Berlin and Paul Kay, *Basic Color Terms*. List the basic color terms of your language, along with their English equivalents. If your language is not included in the Berlin and Kay survey, look up the English terms in an English-your language dictionary. The following situations are possible:

(a) your language has an exact equivalent for each English term.
(b) one English term covers the territory for two or more terms in your language.
(c) one term in your language covers several English terms.

Show how the English color terms and those in your language match up. Do any of the color terms in your language strongly resemble words for things that are that color?

Example One:	English	orange, 'fruit' and 'color'.
Example Two:	Amharic	səmmayawi, 'blue'; səmmaya, 'sky'.

You would find this out by looking up səmmayawi in the Amharic-English half of a dictionary (or textbook glossary) and looking at words near it on the page.

If you do this question, commentary is expected along with the words you cite. Make sure it is clear WHY you are citing each word, WHAT it's an example of, and what it means.

This question is best suited to people who are doing non-Indo-European languages.

2. If you are doing English, American Indian languages, or if you're interested in Anthropology, do the following:

Read the following articles in Benjamin Lee Whorf, *Language, Thought and Reality:*

A. "The relation of habitual thought and behavior to language", pp. 134-159.
   OR
   "Language, mind, and reality", pp.246-270.

B. "An American Indian model of the universe", pp. 57-64
   AND "Grammatical categories", pp. 87-101.

C. OR "A linguistic consideration of thinking in primitive communities", pp.65-86.

You should end up reading either of the articles in Group A, and the articles in either Group B or Group C.

After you have done the reading, summarize Whorf's ideas about the relationship between thought and language. Do you think his ideas make sense? Why, or why not? Can you think of an experiment that could determine whether Whorf is right or not? Is your experiment realistic and/or feasible?

Your answer should have the form of a coherent four or five page essay. Make sure you differentiate between what Whorf thinks and what YOU think. When you refer directly to something Whorf says, indicate in which article he said it, and on what page.

3. In many languages there are different forms of address depending on the SOCIAL relationship between speaker and addressee. Many European languages have developed 'formal' and 'informal' 2nd person pronouns, e.g. Spanish *tú* (informal) and *Usted* (formal). In some Spanish dialects there are even more possible distinctions.

This question is suited for people working on (among others) the following languages: Rumanian, Spanish, French, Russian, Japanese, Korean, Dutch, Swedish, Norwegian, Italian, Afrikaans, Yiddish, and Thai.

(A) Read the article "The pronouns of power and solidarity" by Roger Brown and Albert Gilman, found in:

Giglioli, Pier Paolo (ed.). 1972. *Language and Social Context.* Penguin.
Fishman. Joshua (ed.). 1968. *Readings in the Sociology of Language.* Mouton.
Sebeok, Thomas (ed.). 1960. *Style in Language.* MIT Press.

(B) Describe the situation in your language with respect to the 'pronouns of power and solidarity'. Check all the sources mentioned in Brown and Gilman's bibliography for information on your language. Check also the bibliography (and comments) of the following sources:

Trudgill, Peter. 1974. *Socioloinguistics.* Penguin.
Lambert, Wallace. 1976. *Tu, Vous, Usted: A Socio-Psychological Study of Address Patterns.* Rowley, Mass.: Newbury House.

Compare your language's use of different forms of address with the situation in other languages as discussed in the Brown and Gilman article.

(C) If at all possible, find and summarize any material which explains how and when your language developed the forms of address in use today. You may have to look in books on the history of your language.

(Note to those doing Japanese, Korean, Thai, and perhaps other non-Indo-European languages: You may be dealing with a situation which differs somewhat from that of the pronouns described by Brown and Gilman; structure your discussion according to your language, not according to the situation in Indo-European languages.)

Notebook #6

For this assignment you will be investigating an aspect of language use in your country. You should consult with your instructor as to which option to choose if you are unsure.

A. Bilingualism (You MUST do this if you're doing a minority language.)

To what extent is there bilingualism in your country? Does the government recognize linguistic minorities? To what extent? What kind of commitment has been made toward educating minority children in their native language(s)? Are ALL children included in bilingual education programs, or just minority children? To what extent do political considerations affect bilingual education programs? Is there opposition to the idea? Why? Have there been recent changes in policy or attitude? Are there minority language books and newspapers published in your country? Is there minority language TV and/or radio? Are government documents and announcements bi- or multilingual? Is there a grass-roots movement to encourage or revive the use of a minority language?

B. Legal-Political Aspects of a Minority Language

In what language(s) are governmental proceedings such as legislative debate, bureaucratic regulations, executive orders, etc., carried out? Does only one language have official status, or are secondary languages allowed? In what language(s) are legislative proceedings, laws and regulations published? If minority languages are disallowed in these contexts, is there any attempt on the part of the government or private groups to provide translations for minority speakers and to facilitate the access of minorities to the government?

Are speakers of minority languages allowed to use their own languages in court, in bringing suit, testifying in their own defense, etc.? If not, does the judicial system provide for translation? Are indictments, court records, depositions, etc., allowed in minority languages?

Are public information and warning signs posted in minority languages? Is such posting required? Prohibited?

C. Language Standardization (Recommended for France, Germany, Italy, Arab countries)

Does your country have a distinction between 'standard' language and regional and/or socio-economic variants? How and when did this standard originate? Is there any kind of Language Academy to determine or enforce this standard? If so, how effective is it? What is the government policy about regional variation? Is there any extralinguistic factor that contributed to the development of the standard (e.g., a great literature, political domination of one region, etc.)?

If you are doing Arabic or Greek, you must deal with the question of DIGLOSSIA.

Notebook #7

There are four questions below, each about some aspect of language. Answer the one that you are most interested in. See your instructor for aid in choosing which question to research. In addition to the topics below, for this assignment you have a 'choose your own' option. If there is some issue about language in your country or about your language in general that you have run into in the course of your research for the previous six assignments, you may write about that instead with your instructor's permission.

A. Investigate the rise of a national literature in your language/country. Was this part of a general nationalist movement? Were there any literary 'giants' who influenced the development of your national literature?

Do not do this question if you are doing the United States, Great Britain, France, Italy, Spain, Germany or Canada, unless you are doing a minority language in one of these countries.

B. Investigate dialect variation in your country. How much variation is there among dialects of your language? Discuss the factors that affected the development of dialects in your country. Is the dialect variation based on geography or social class? If so, which and how? Be specific.

You may answer the question by focusing on a specific dialect in your country. For example, if you are doing the United States, you may report on Black English, Appalachian English, Southern English, dialect variation in New England....

C. What percentage of the speakers of your language in your country can read and write it? How well? Have these figures increased or decreased in the past 25 or 50 years? If it has increased, what has brought about the increase? If they have decreased, what has brought about the decrease? What, if anything, is being done to increase literacy?

D. If your language originated as a pidgin, talk about the historical development, i.e. how did it originate? What are the component languages? What changes have taken place? Is the pidgin/creole becoming more like one or the other of the component languages?

If you are doing Hawaiian, Haitian French, Yiddish, or Black English, you should strongly consider doing this.

E. Is a 'world language' other than the language you are working on used in your country for education, technology, international commerce, or even for administration or judicial purposes? If so, is the use of this 'language of wider communication' authorized, tolerated, or discouraged by the government? Is there an attempt being made to establish a native language of the area for use in these contexts?

a. If your language is accorded official status, is it successfully competing with the established 'world language'?

b. If your language is not accorded official status, is it in danger of being replaced by a world language or the official native language of ,our country?

Appendix B

Selected Bibliography for Notebooks #6 and #7

Places to start:

- the card catalog, general books on education in your country;
- the indices on Bilingualism and Second Language Learning in library handout;
- the New York Times Index (also indices to other newspapers);
- the Reader's Guide to Periodical Literature.

The following sources may contain either information on your country or references to books and articles which are relevant to your country and your topic:

Anderson, Theodore and Mildred Boyer. 1970. *Bilingual Schooling in the U.S.* Washington, D.C.: U.S. Government Printing Office.

Hertzler, Joyce O. 1965. *A Sociology of Language.* Random House.

Ferguson, Charles. 1959. Diglossia. *Word* 15.325-340.

Fishman, Joshua (ed.). 1972. *Advances in the Sociology of Language.* The Hague: Mouton.

____________ (ed.). 1968. *Readings in the Sociology of Language.* The Hague: Mouton.

Fishman, Joshua, Charles Ferguson and Jyotirindra Das Gupta. 1968. *Language Problems of Developing Nations.* John Wiley and Sons.

Macnamara, John. 1966. *Bilingualism and Primary Education.* Edinburgh University Press. [Deals mostly with Ireland.]

Rubin, Joan and Björn Jernudd. 1971. *Can Language be Planned?* University of Hawaii Press.

Rubin, Joan, and Roger Shuy. 1973. *Language Planning.* Georgetown University Press.

Texas Education Agency. 1977. *Bilingual Education K-3 Resource Manual.*

UNESCO. 1965. *Report on an International Seminar on Bilingualism in Education.* London: Her Majesty's Stationery Office.

APPENDIX C:

Library Orientation Handout*

SELECTED SOURCES - LINGUISTICS

HANDBOOKS AND MANUALS

P
201
K35
REF

Katzner, Kenneth. 1975. *The Languages of the World*. New York: Funk and Wagnalls.

This entertaining and very readable guide is arranged in three sections. The first consists of broad essays concerning the major language families of the world. The second is composed of descriptive articles on nearly 200 languages, with each article containing a quotation (with translation) from the language. The third section is a country by country survey which provides basic information on languages spoken in various lands. An index of languages and language families is provided.

P
203
V6
REF

Voegelin, C. F. and F. M. Voegelin. 1977. *Classification and Index of the World's Languages*. New York: Elsevier.

Articles for broad language groupings and language families are arranged alphabetically. Each article provides a brief description of the grouping, including information regarding the number and localities of speakers, and listings of the various language members of the group. There is an index for names of groups, subgroups, individual languages, dialects, and tribes. Obviously, this volume is of great value in determining language relationships and affiliations. Other classifications of specific language groups are available in the Perry-Castañeda Library. To find them, look in the subject catalog for the subdivision 'Classification' under the desired language group (e.g., 'African Languages - Classification').

P
381
E93
A428
REF

Allen, C. G. 1975. *A Manual of European Languages for Librarians*. London and New York: Bowker.

Grammarians, translators and students of linguistics will find this extraordinary work useful, as will the librarians

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*Compiled by John Burlinson, Special Services Department, University of Texas General Libraries, January 1979.

Title **Linguistics and Related Disciplines: The Linguistic, Philosophical, and Political Thought of Noam Chomsky**

Level No prerequisites

Description Noam Chomsky's scholarship has made him familiar to two quite different groups of people: his technical writings in theoretical linguistics have become the basis of linguistic scholarship in this country and abroad for the last 30 years. Simultaneously, his writings on a wide range of political and social issues have provoked heated and wide-ranging debate throughout the political spectrum. This class explores the relationship between these two sides of Chomsky's intellectual life and thought. Particular attention is focussed on his views of "human nature" and the necessary tension between freedom and creativity on the one hand, and rules and constraints on the other.

Required Reading

Chomsky, N. 1957. Syntactic Structures.
---------- 1965. "Linguistic theory." In R.J. Mead, Jr., ed., Northeast Conference on the Teaching of Foreign Languages. pp. 43-49.
---------- 1969. Remarks to the Commission MIT Education. November 11.
---------- 1971. Problems of Knowledge and Freedom.
---------- 1973a. For Reasons of State.
---------- 1973b. "One man's view." Business Today; May: 13-15.
---------- 1975. Reflections on Language.
---------- 1976. "Noam Chomsky talks to Peter Jay. How to be an anarchist." The New Review; 3(29): 25-32.
---------- 1977. Language and Responsibility.
---------- 1978. "Interview with Noam Chomsky." Linguistic Analysis; 4: 301-19.
---------- 1983. The Generative Enterprise.
Lieber, J. 1976. Noam Chomsky: A Philosophical Overview.
Saporta, S. "Noam Chomsky: His Epistemology and His Ethics." (unpublished).
Searle, J. 1974. "Chomsky's Revolution in Linguistics." In G. Harman, ed., On Noam Chomsky: Critical Essays. pp. 3-33.
Stent, G. 1975. "Limits to the scientific understanding of man." Science; 187: 1052-57.
Weimer, W. 1973. "Psycholinguistics and Plato's paradoxes of the Meno." American Psychologist; January: 15-33.

Syllabus

Linguistics
Philosophy/Psychology/Biology: On Interpreting the World
Politics: On Changing the World
Education: Action Informed by Reason

Requirements Weekly essay.

Source

University of Washington
Instructor: Sol Saporta

Title **Linguistic Approaches to Point of View in Fiction**

Level Fulfills Distribution Requirement Area 4; for English majors, fulfills Requirement A.

Description This course is intended to acquaint students with the principles and methods of contemporary linguistics that are helpful in approaching "point of view" in literary text. It is meant to increase awareness of style and skills in stylistic analysis, with in-depth focus on 1) the communicative strategies available to writers and 2) the responses that the strategies used in a particular text elicit in readers. For the most part, the course will take a microscopic look at excerpts from a variety of short stories, but will also include discussion of a few complete texts. This analysis is meant to open up a fuller understanding of the texts, not to grind them to shreds. Students will have the opportunity to synthesize the various aspects of point of view that have been discussed in term papers.

Required Readings

Texts: Stone, Wilfred, Nancy Huddleston Packer, and Robert Hoopes. 1983. The Short Story: An Introduction. 2nd ed. New York, NY: McGraw-Hill.

Traugott, Elizabeth Closs and Mary Louise Pratt. 1980. Linguistics for Students of Literature. New York, NY: Harcourt Brace Jovanovich.

Suggested Readings

Carter, Ronald. 1982. An Introductory Reader in Stylistics. London: Allen and Unwin.

Leech, Geoffrey and Michael N. Short. 1982. Style in Fiction: a Linguistic Introduction to English Fictional Prose. New York, NY: Longman.

Syllabus

Lexicon
Syntax
Transitivity and Role Structures
Speech Acts
Pragmatic Structures
Spatial and Social Deixis
Temporal Deixis
Other Temporal Relations
Showing vs Telling; Story vs Discourse
Presentation of Speech
Free Indirect Style
Standard Language, Dialect
Second Languages
Point of View and Problems of Translation

Requirements Three exercises, two short papers, one term paper.

Source Stanford University
Instructor: Elizabeth Closs Traugott

Title **Linguistics and Literature**

Level Undergraduate/graduate

Description This course has two objectives: (a) to discuss the system underlying the language we use and hear around us every day, and (b) to suggest ways to approach the language of a literary text.

The course uses as a starting point a sketch of fundamental linguistic concepts developed by Noam Chomsky and his followers, with special attention to the organization of language-phonologic, syntactic, and semantic. From there it moves on to some more recent ideas about the function of language in communication, particularly the establishment of participant roles and of shared information. In the final weeks it will be concerned with regional, social, and ethnic varieties of English. Close attention to language is an essential prerequisite to literary criticism and even appreciation, and the course will focus on developing skills both in reading and talking about the language of literary texts. Such skills are obviously "precritical" and are to be regarded as a necessary beginning, but not as an end in themselves. Students should be able to use these skills all their lives, not just in English or linguistics classes.

By the end of the quarter, students should know:

(a) many of the basic issues to which the discipline of linguistics is addressed;
(b) much of the basic vocabulary of linguistics;
(c) how to transcribe speech phonetically, and how to analyze the syntax, semantics, or "pragmatics" of a sentence;
(d) how to do rigorous stylistic analysis of short literary texts, based on linguistic principles;
(e) some of the basic issues in literary theory, e.g., the ideas behind "literary competence" speech act approaches to fiction, and point of view.

Required Readings Text: Traugott, Elizabeth Closs and Mary Louise Pratt. 1980. Linguistics for Students of Literature. New York, NY: Harcourt Brace Jovanovich.

Suggested Readings Freeman, Donald C., ed. 1981. Essays in Modern Stylistics. (Required for graduate students.)

Williamson, Juanita, and Virginia M. Burke, eds. 1971. A Various Language: Perspectives on American Dialects.

Syllabus

What Is Language
Goals of Linguistic Study
Linguistics and Literature
Speech vs Writing
Phonetics
Phonology
Morphemes
Syntax
Complex Sentence Structure
Relativization
Syntax and Literature
Semantics
Role Structure and Literary Analysis
Transitive vs Intransitive
Speech Acts

Discourse Strategies
Point of View in Literature
Standard Language
Regional Dialects
Social Dialects
Black English Vernacular
English in Contact
Use of Dialect in Literature
Multilingual Literature

Requirements Undergraduates: phonetic transcription of a poem, 1-page discussion, two short papers, midterm, final.

Graduate students: All of above plus a short discussion and critique of a paper in Freeman.

Source Stanford University
Instructor: Elizabeth Closs Traugott

Title **Mysteries of Mind, Brain and Humanity**

Level Prerequisite: Admission to University Honors Program

Description Interdisciplinary perspectives (from linguistics, psychology, literature, philosophy, biology, and biochemistry) on the mind and the brain. The course focuses on the acquisition and storage of knowledge, the evolution of the brain, consciousness and emotion, intelligence, and brain/mind abnormalities.

Required Readings

Bloom, Floyd E. et al. Brain, Mind, and Behavior.
Churchland, Paul. Matter and Consciousness.
Searle, John. Minds, Brains and Science.

Suggested Readings

Faulkner, William. The Sound and the Fury.
Gould, Stephen Jay. The Mismeasure of Man.
Jaynes, Julian. The Origin of Consciousness in the Breakdown of the Bicameral Mind.
Johnson, E. Marshall et al. Human Anatomy.
Kesey, Ken. One Flew Over the Cuckoo's Nest.
Lieberman, Philip. The Biology and Evolution of Language.
Plato. Protagoras and Meno.
Sacks, Oliver. The Man Who Mistook His Wife for a Hat.
St. Exupery, Antonine de. Wind, Sand and Stars.
Sagan, Carl. Dragons of Eden.
Shakespeare, William. Othello.
Woolf, Virginia. Mrs. Dalloway.

Syllabus

Introduction
The Concept of Mind
The Gross and Microscopic Anatomy of the Nervous System
Measurement of Mind and Brain
The Mind, Ultimately the Brain
Mind, Knowledge, and Morality
Rationalism and Empiricism for the 1980's
Learning and Memory
The Inheritance of Knowledge
Chance and Necessity in Language Acquisition
Visual, Auditory, and Speech Centers of the Nervous System
Memory and Desire
Motor Behavior and Memory
Sensation, Perception, and Sensori-Motor Integration
Molecular Mechanisms of Memory Storage in the Brain
Leach Errors and Spinguistic Evidence
Theories of Perception
Ignorance
Creation Myths
The Evolution of the Human Brain and Mind
The Development of the Human Nervous System from Conception to Maturity
Complex Behaviors in Fetuses and Infants
Language Origins
The Evolution of Mathematics
States of Consciousness
Observations on Consciousness and Quantum Mechanics
Modelling Intelligence
Consciousness and Machines
Theories of Emotion
Do Wishes Control Neurons?

Happiness, Knowledge and the Unity of Virtue
Pathways of Desire
Post-Traumatic Shock
Emotional Challenges
Men's Styles/Women's Styles
The Nature and Measurement of Intelligence
Observable Brain Differences
Can Girls Do Math?
The Modularity of Mind
The Politics of Difference
Language Deficits
Deficits and Excesses
Russell's Paradox
Schizophrenia
Chronics, Acutes, and Bull Goose Loonies
Sports and Other Forms of Mob Violence
Shamanism
Natural and Unnatural Highs
Theater of the Night
Immortality
Skill in Chess
Summaries and Predictions
Review and Predictions
Consciousness

Requirements	Attendance required at three lab sessions, one paper, two lab assignments, a continuous journal, an independent project, two exams.
Other	Nine (9) credit hours.
Source	University of Alabama - Birmingham Instructors: Ed Battistella, Linguistics Ed Cook, Psychology Ada Long, English Lila Luce, Philosophy Dail Mullins, Science Education Virginia Volker, Biology

Offering A Faculty Enrichment Seminar In Linguistics

Nancy C. Dorian, Bryn Mawr College

The kind of seminar which might be given in Linguistics under the heading of "Faculty Enrichment" would differ very much according to the particular faculty members intended as participants. My college (Bryn Mawr College in Bryn Mawr, Pennsylvania) wanted to involve foreign language teachers, and that fact determined the approach I took. It would have been perfectly possible (and within my competence) to undertake a seminar in Linguistics for colleagues in the social sciences, but every aspect of the seminar would then have been different. (Likewise in the case of a seminar in Linguistics for literary scholars, although that would not have been within my competence.) The seminar I will be referring to is only a single model, then, and not by any means a blueprint for Faculty Enrichment Seminars in Linguistics generally.

Whatever the focus of such a seminar, it is likely that faculty will be most willing to attend to someone whom they see as speaking out of firsthand experience in the very particular vineyard which they labor themselves. If I had been working with social science colleagues, I would have drawn very heavily on my long fieldwork experience and my research in sociolinguistics. Since I was working with foreign language teachers, I drew very heavily on two decades of classroom foreign-language teaching and on many and various stints as a foreign-language learner.

Other considerations also influenced choices I made. The College had recognized that a seminar, if it was going to get serious effort and whole-hearted participation from overworked professors, would have to come forward with an offer of relief on some other score. Thanks to a grant from a trust* one full-time tenure-track member each from the departments of French, German, Spanish, Italian, Latin, and Greek received released time for one course in order to participate; in addition, one member of the Russian Department participated in preparation for a second seminar, to be given by him the following semester, on more strictly pedagogical aspects of Linguistics (in which I will then be a consulting visitor, as he was in my seminar). The importance the College placed on the Seminar was enhanced by their guarantee of released time to core participants; the selection of midcareer, mostly tenured, but relatively young faculty as core participants also made inclusion seem a privilege. A good many other foreign language teachers were then approved as guests, provided they brought strong skills, interesting backgrounds, and convincing interest to the enterprize; both very senior faculty and very junior faculty (including two part-time instructors) were among the guests. The total number of participants was 16 (myself included), and the languages represented among this larger group then included the following less commonly taught languages: Chinese (2 participants), Swedish (2 participants), Turkish (2 participants), Modern Greek (2 participants), Hebrew (2 participants), and Scottish Gaelic (1 participant). At least six participants had studied both Latin and Ancient Greek; the great majority had Latin and French in common as well as English. This richness in language backgrounds was a great advantage and made a fairly high level of adventurousness possible.

Neither the institution nor I considered my assignment to be primarily practical in focus. The real goal was to strike intellectual sparks: to prompt re-thinking of familiar material, to offer new material that would open horizons and stretch understanding and imagination. At the very end of the seminar I hoped to be able to demonstrate that many of the matters we had discussed could be given practical application in one way or another, but participants were told in advance that this seminar would not be geared toward changes in their teaching techniques or toward immediate improvements in their general pedagogical skills.

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*The Pew Charitable Trust

In fact I believe that a very narrow practical focus would produce only very short-term benefit. With a core group of relatively young participants, bringing fresh perspectives and opening new vistas seems more likely to stimulate interests that could lead the participants to go on thinking freshly on their own after the seminar's end.

I chose a three-pronged approach. On the assumption that most participants would have had some training in Latin, but that the training was likely to have come too early in schooling to be well understood, I proposed that we look at Latin afresh together, trying to understand how it worked as a grammatical system. Along with this went a close look at how the more traditional view of Latin grammar has come to affect our expectations about our own language and other languages as well.

In order to throw the better known languages of Western Europe into sharp relief, a second approach was to introduce as much information from and about non-Indo-European languages as possible. Here the fact that we had participants familiar with Chinese, Hebrew, and Turkish was especially useful. But I also drew on other languages (for example, on an Australian aboriginal language and a South American Indian language, via hand-outs) for material.

Languages less familiar to speakers of Western European languages of Indo-European descent helped us in two special ways. Often they made grammatical distinctions unknown or uncommon in the more familiar languages. An example of this type would be the elaborate system of so-called "evidentials" in a good many languages (e.g., Kashaya of the Central Pomo group of California; Akha of Lolo-Burmese; Tuyuca of Brazil and Columbia). The evidentials in these languages are usually as inescapable as verbal tense in Western European languages; they must appear in a sentence to mark how the speaker came by his knowledge (that is, the "evidence" he relies on). Evidential markers typically distinguish among knowledge obtained be personal witness, knowledge by evidence of other senses, knowledge by hearsay report, knowledge by deductive reasoning, and the like. It would not simply be irresponsible to say something without one of these markers, it would be impossible, in some languages. Just as a verb lacking some indication of time is unsayable in a complete English sentence, a completely formed sentence in one of these languages might be impossible without evidential marking. Or at most a sentence without overt evidential marking might be allowed, but the very absence of the marker would distinguish a certain source of knowledge from all the others.

Apart from providing examples of categories quite unusual from a Western European standpoint, the less familiar languages gave us parallels of an unexpected sort for categories very frequent in most of the languages we know. Speakers of Indo-European languages are certainly prepared to meet nouns with obligatory gender assignment, for example. But no Indo-European language has more than three genders, and the very term "gender" also seems to turn our thinking toward a three-way division: male, female, and neither of those (= neuter). As a result we tend to be incredulous if we hear of a "gender system" with seven or eight different genders, as can happen in the Bantu languages of sub-Saharan Africa.

In our own group we spent a good deal of time exploring gender as a grammatical concept, and it was one of our more successful ventures. Because we had the usual expectations, rooted in a grammatical terminology drawn from the Indo-European Classical languages, our members looked for "gender" to appear in suffixes, in concord, in pronoun reference, and so forth. Our one native speaker of Chinese was not trained to think about the possibility of gender, either, in a language like

Chinese, without true suffixation, without any sex-based pronoun use, and without the elaborate noun-phrase agreement of most Indo-European languages (e.g. Latin illa parva puella,'that small girl,' with all three words marked as feminine subject forms). I asked the native Chinese speaker to report on "measure words" (also known as "classifiers"), however, and as other seminar members asked questions about what they heard, a certain shock of recognition occured on both sides, Some of the guestions and answers went more or less like this:

Q: Does every noun have a measure word?
A: Yes. Every noun.
Q: How do you know which measure word will go with a particular noun?
A: You can't predict. You have to learn the measure word for each noun. Some nouns that take the same measure word have something in common, but others are completely different.
Q: How early do you start to teach the measure words?
A: You teach them right away. As soon as they learn the noun, they also learn the measure word. They can't use the noun unless they know the measure word, so they have to memorize them together.
Q: How many measure words are there in all?
A: I don't know. Some of them are very rare, The rare ones are used in very learned language. Probably two dozen, maybe more.

By this time it was clear to everyone present that the "measure-word" system of Chinese worked a lot like gender. There might be two dozen classes,but there was still obligatory (and mostly unpredictable) assignment to those classes. The nouns often couldn't be set into sentences grammatically and sensibly without the correct measure word. Teachers of Chinese had to insist on on immediate memorization of measure-word class assignment of Chinese nouns exactly the way teachers of French, German and Spanish had to insist on immediate memorization of gender-class assignment of nouns in those languages. Since the Indo-European focused teachers had never thought about the properties of gender in any abstract, general way, and the native chinese speaker had never needed to deal with the traditional "gender" notion within the Indo-European framework, the parallels were a revelation to both parties.

Gender was a prime topic in another way as well. Of all the distintions commonly forced upon users of Western European languages, gender seems like the least useful. Native speakers of English tend to feel they've been spared a lot of unnecessary trouble by the fact that English stopped marking gender early in its history. So after we had considerd gender, the way it is marked in various languages, and its analogs in non-Indo-European languages, we took up the question of what gender is good for. That discussion took us into the realm of agreement and the utility of multiple markings of grammatical function: the power of redundancy. If a category is marked several times over, any obstacles in the communication channel will be less destructive to the communication. If the speaker articulates poorly, if the person addressed is hard of hearing, if there is constant or intermittent noise in the surroundings, the message still stands a good chance of getting through when there are several repetitions of the signals of function. In Indo-European languages, gender intertwines deeply with markers of case and number; the basic gender assignment of a noun determines which case and number signal(s) will appear, and having two or three genders multiplies the markings which are distinctive -- that is, the markings which can only represent one case or number, especially in combination with markings on other words in the noun phrase which must carry signals of that case and number as well. In addition, cross reference, in a language which has grammatical gender, can be used very effectively to make the intended antecedent clear. In a complex structure like the one in German below, there is no need to repeat any noun, because the pattern of the article and the numerical adjective tells the story perfectly clearly:

Als junger Mann hatte er Ruf und Geld, am Ende seines Lebens nur noch das eine.

'As (a) young man he had reputation (Ruf, masc.) and money (Geld, neut.), at the end of his life he had only the one' (marked as neuter; therefore it must be the money which remained, while the reputation proved impermanent).

Gender markings are not only potentially useful to provide redundancy and to make structural linkages unmistakable; they can also be used to artistic effect. The German example just given suggests in a small way how this might be true. When the language user is offered a choice of ways to identify the antecedent, options as to what can be positioned within the special focus of attention are created, too. The "architecture" of the construction can be varied in order to achieve a particular effect. At the extreme of gender marking and of the concord possibilities it opens up, a kind of poetry of concord may even come into being. The Bantu language specialist Desmond Cole speaks feelingly of the "fascinating system of concords, which puts music and poetry into every Bantu sentence;" he is referring to the gender-class prefixes which are required for each noun, and are attached not only to the noun but also to nearly every other word which appears with it in the sentence, producing a rich alliterative effect.

And so it seems that gender, that "excess baggage" of grammar, has more to recommend it than one might first suppose.

One more focus which seems almost to beg for attention in a seminar of the type our group undertook is change in language. There are a number of good reasons why this should be so. We were looking quite a bit at Latin, a non-contemporary language preserved in a frozen form; most of us knew modern languages derived from some version of Latin, and all of us knew at least one modern language related to it (namely English). We consequently had a diachronic ("across time") perspective as a given, more or less. Furthermore, nearly all of us knew something about earlier stages of the language we were professionally most concerned with, and some had had quite a lot of historical training of that sort.

Many phenomena of language history are just plain peculiar and fascinating in themselves, in any case: folk etymologies which make an understandable-seeming pickax(e) out of a Middle English word picois, derived from Old French and lacking all connection with axes; back formations which provide a singular pea to go with what looks like a plural peas(e); spelling pronunciations that put the -head back in forehead and spoil the nursery rhyme about the little girl of extreme behaviors and the lock of hair (horrid, forehead).

Historical material can be enjoued for its own sake, and this particular group proved to take marked interest in it. That interest then opened other avenues by which to approach language phenomena. One was to explore ways in which particular developments come about, deepening our general appreciation for the complexity and yet the inevitability of various types of change. In this connection we looked not only back, at what had happened between Old English and Modern English, or between Classicla Latin and French, say, but also around, at analogous phenomena in other spheres of language use.

Once we recognized, for example, the tendency for word boundaries to become obscured or assigned in a different way (as in the reassignment of the indefinite article's final -n, to give a nickname and a newt from earlier an ekename and an ewte, in the history of English), we could look as well at the language of young children coming to grips with word divisions: "Uncle Leonard has myopia." -- "Your opia."

And some of the curiosities of current-day colloquial speech also come to seem more understandable: It's a whole nother ballgame; I'll take what's ever left. Once the subtle processes of change are recognized for what they are, it can become easier to recognize the areas where things are in flux, unresolved, or obscure in one's own language.

Those who can learn to look at language as a system with pressures toward simplification and regularization on the one hand, and pressures toward differentiation and elaboration on the other -- both sorts of pressures operating at all times, but with varying success -- can also learn to understand better (and even to take an intellectual interest in) their student's "mistakes", whether in English or in the so-called "target language."

Foreign-language teachers often share with English teachers a sinking feeling that the English language is going rapidly to wrack and ruin, and that no one is struggling to shore up the foundations of English grammar. For the bedrock pessimists it seems to much to hope, then, that the English mother-tongue student who has no proper grasp of his or her own language should manage to acquire control of some other language's grammar. It can give both an intellectual challenge and a reassuring sense of motivated, non-random language behavior to learn to puzzle out the currents of contemporary change processes in English (especially colloquial English). It's not a wild disregard for order or proprieties which leads our contemporaries to use the redundant-seeming expression *equally as*. They are simply extending, in a very orderly fashion, a well established pattern of comparison which already includes expressions like *just as*, *(not) nearly as*, *twice as*, *almost as*, *at least as*, and so forth. No one has to like or approve of the extension; but recognizing its source can at least ward off the apocalyptic view of a random, patternless disintegration settling upon the prostrate English language.

Discovering that a shift is underway toward marking the subjunctive in English past contrary-to-fact sentences by means of *would*, in preference to any other device (i.e., *if I would have known* instead of *if I had known* or *had I known*), can lead to some understanding of English-speaking students' tendency also to overuse the German equivalent *wurde*; a teacher who knows that his or her students are more likely to be saying *if I would have known* than people in his or her young days will plan a little more consciously to prevent overuse of *wurde* when the time comes to introduce contrary-to-fact conditions in German.

A mind open to looking at language on the way to somewhere, but with the destination and route not fully determined, can handle the murky corners better. Our group looked, for example, at the unique position occupied in English by *a couple (of)* -- neither quite singular nor quite plural. We usually say *I've been there a couple of times*, with a plural noun; but *That couple of men are hanging around again* is about as possible as *Those couple of men are hanging around again*: plural verb, but either singular or plural demonstrative. Most quantity elements either precede *more* or follow *another*... *of* (*several more men*; *another group of men*). At least in colloquial style, *a couple (of)* can do both: *a couple more men*, *another couple (of) men*.

The particular group which convened for the Faculty Enrichment Seminar in language and Linguistics at Bryn Mawr was a lively one, curious, interested, and eager to participate. From the third week on, members of the group prepared reports at a great rate, explaining phenomena in the languages they taught or knew for the benefit of the rest of the group. There was only one requirement: whoever was presenting material had to provide a hand-out for the others. This policy ensured that the presenter had thought through the issue carefully and could make the report coherent and efficient. After a report, the whole group was free to ask questions indefinitely, and it was in those question sessions that much of the best learning took place. As the members who didn't happen to know the language under discussion asked ever more penetrating questions of the presenter, the responses made the phenomena which had been presented clearer and the point at which those phenomena came into play also became more graspable.

Some of the reports were the obvious ones, given the membership of the seminar:

tone in Chinese extremes of suffixation in Turkish, internal vowel change in Hebrew, and so forth. But we also had reports on the discrepancy between the inflectional patterns written French suggests and the patterns the listener actually hears, and on the delight, in Classical Latin style, in the abandonment of collocation (the use of adjacency to emphasize the close grammatical connection between particular words) and in the construction of sentences which seem to place a modifier almost anywhere other than beside the element it modifies.

There are probably as many ideas about what might be featured in a "Faculty Enrichment Seminar" involving Linguistics as there are linguists. My personal expectation is that most of them would have a fair chance of success, provided only that a single condition is met: the linguist must be not an expert with some sort of superior fund of knowledge to impart, but rather a colleague who has shared many of the experiences, difficulties, and objectives of the other members of the group. Dispensing expertise is not really likely to be enriching. Pooling knowledge, building on shared experience, deepening insights, opening new perspectives on already familiar material -- these stand a chance of living up to the challenging term "enrichment." With or wothout any direct change in faculty teaching practices, the seminar will have worked if the material looked at goes on provoking observations, ruminations, reconsiderations, and also raises questions or puzzles in the members' minds after the sessions are concluded.

INNOVATIONS IN LINGUISTICS EDUCATION 2.2 (1982), 55-76

PHONEMES AND FEATURES*

by

Arnold M. Zwicky

Ohio State University

1. Introduction

In a general introduction to linguistics certain topics are both indispensable and pedagogically difficult. I believe that the concepts of the PHONEME and the FEATURE are indispensable to the phonology section of such a course: the two constructs can be argued to be PSYCHOLOGICALLY REAL, indeed, to be fundamental units in the mental organization of phonological abilities; both constructs are ABSTRACT, not simply or directly identifiable with actual physical events; these constructs figure prominently in the statement of the REGULARITIES governing the phonological side of any particular language; moreover, these regularities are LANGUAGE-SPECIFIC; but they are phonetically NATURAL, explicable to a large extent in terms of the conflicting needs of clarity and ease. The topics of psychological reality, abstractness, regularity, language differences, and naturalness are all important ones in an introductory linguistics course, and all can be explored in a short treatment of phonemes and features.

Despite their centrality, the phoneme and feature concepts are notoriously difficult for students to grasp. Undoubtedly their abstract character has a lot to do with their difficulty; students in search of a usable and memorizable explanation will not derive any practical benefit from such definitions as the following, careful though they are:

> A phoneme is a sound of a given language that native speakers agree is just one segment, and which enables them to recognize differences of meaning between words.
>
> (Suzette Haden Elgin, *What Is Linguistics?* 2nd ed. (Prentice-Hall, 1979), p. 85)

> DISTINCTIVE FEATURES. A set of universal, putatively innate, phonetic and phonological properties by reference to which the speech sounds of the world's languages are described ...
>
> (Neil Smith and Deirdre Wilson, *Modern Linguistics* (Indiana Univ. Press, 1979), p. 275)

Instead, the student must be led to an appreciation of the concepts through a series of examples. My own strategy is to lean very heavily on material illustrating the psychological reality of phonemes and features, so as to work against the students' tendency to see these constructs as

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something invented by linguists for their own arcane purposes, rather than something relevant to ordinary human beings. In the two sections that follow, I discuss briefly some pedagogical problems specific to phonemes/ features and then provide, for each, several exercises designed to illustrate psychological reality; sample answers to the exercises appear in an appendix. This material was developed for a class of beginning graduate students and advanced undergraduates, although some of it could be adapted to classroom use in a lower-division 'introduction to language' course rather than an upper-division 'introduction to linguistics'.

II. Phonemes

My focus here is on the classical phoneme and the principles governing the distribution of allophones.

A special problem in introducing the phoneme concept has to do with the sequencing of phonetics and phonology in an introductory course. If phonetics leads, the student must first learn to attend to aspects of sound that are normally outside of conscious reflection and then to disregard these aspects in phonemic transcription. As a result, phonemics might seem unreal. If the student first learns phonemic transcription for English, then goes on to learn phonetic transcription and terminology, the student may be encouraged to persist in English-based beliefs as to which sounds are alike and different. I have found neither sequence entirely satisfactory; the exercises below have been used with both orders of presentation.

Before these exercises are given out, the class has had a presentation of contrast/complementary distribution/free variation in which the following allophonic principles of American English (among others) were mentioned:

aspiration of voiceless stops at the beginning of a word or a stressed syllable;

devoicing of liquids after voiceless stops;

affrication and retroflexion of t d before r;

h realized as ç before *y*;

labialization of consonants before rounded vowels;

develarization of ɫ before front vowels;

nasalization of vowel nuclei before nasals;

variation between plain and glottalized voiceless stops syllable-finally, with ʔ as a variant of t' in this position;

variation between əR and R̩ when unstressed, for the resonants r l n m;

i e u o as unstressed (free) variants of i^y e^y u^w o^w, with ɪ as a (free) variant of i word-finally.

With this background, it is possible to have the class analyze cases of (a) phonemic hearing of other languages; (b) phonemic hearing of dialects with different systems; (c) 'foreign accents' in reproducing phrases in languages other than English; and (d) 'phonemic memory', manifested as a faulty memory for actual pronunciations. All of these point to the psychological reality of the phoneme, as do the following: (e) the phenomenon of categorial perception (which can be discussed in a later section of the course on psycholinguistics); (f) the phonemic rather than phonetic nature of alphabetic writing systems (which can be discussed in a later section on writing systems); (g) slips of the tongue; (h) pig latins; and (i) rhyming schemes. It is these last three cases I will illustrate here. The exercises can of course be adapted if a different set of allophonic processes has been introduced.

Exercise for (g).

According to the *American Heritage Dictionary* (1976 college edition), a SPOONERISM is 'an unintentional transposition of sounds in spoken language, as *Let me sew you to your sheet* for *Let me show you to your seat.* [After William A. Spooner (1844-1930), English clergyman, noted for such slips.]'. Consider the following spoonerism:

	INTENDED TARGET	ACTUAL UTTERANCE
A	pink stems	tink spems

And an example of a related type of speech error, involving misplacement:

B	find wit	fide wint

Suppose that the phonetic transcriptions for the intended targets are as follows:

A [pʰɪ̃ŋk stɛ̃mz]

B [fã͡ỹnd wɪt]

Now answer the following three questions:

1. If it is SOUNDS that are transposed or misplaced, what would be the phonetic transcriptions for the errors *tink spems* and *fide wint*? (Remember that each symbol in a phonetic transcription represents a single sound.)

2. What are the correct phonetic transcriptions for *tink spems* and *fide wint*?

3. Given your answers in 1 and 2, how would you revise the American Heritage Dictionary definition of SPOONERISM? Why?

Exercise for (h).

According to Robbins Burling (*Man's Many Voices*, Holt, Rinehart and Winston, 1970, p. 135),

> At some time during childhood, most American children learn to use "pig latin". Instead of *he will give it to me*, a child will learn to say *iyhey ilway ivgay itey uwtey iymay*. This distorted form, of course, is accomplished by a simple phonological transformation. Children teach the pattern to one another by some such instruction as this: "take the first sound of each word and put it on the end and then add *a*." This rule is reasonably accurate though a linguist might want to refine it ...

Many people have learned a form of pig latin in which not only the first consonant of a word, but a whole word-initial consonant cluster, is moved to the end of the word, so that *stop* is transformed to *opstay*; however, we are going to consider a form of pig latin that follows exactly the rule Burling cities, so that *stop* is transformed to *topsay*. Examine the three following phrases with respect to this pig latin:

(A) stop play [stap pʰl̥eʸ]

(B) try Hugh [ṭˢ·r̥ay çɥuʷ]

(C) low cool [ɫoʷ kʷʰuʷɫ]

and answer the following questions:

1. If it is a consonant SOUND that moves to the end of the word and has [eʸ] attached to it, what would be the phonetic transcriptions of the transformed versions of (A)-(C) in this pig latin?

2. What are the correct phonetic transcriptions for the transformed versions of (A)-(C) in this pig latin?

3. In light of your answers to 1 and 2, how would you revise Burling's rough rule for this pig latin? Why?

Exercise for (i).

Consider ordinary RHYME in English. According to Karl Beckson and Arthur Ganz, *Literary Terms: A Dictionary* (Farrar, Straus and Giroux, 1975), p. 210:

> The most usual English rhyme is variously called "true", "full", "perfect", "complete", or RIME SUFFISANTE. In it, the final accented vowels of the rhyming words and all succeeding sounds are identical, while preceding sounds are different, as in *bake-rake*, *heaven-seven*.

The following rendition of the beginning of a familiar nursery rhyme counts as full rhyme:

(A) ǰǽk' sprǽt'

kʰúd íʸt nóʷ fǽʔ

So does the following rendition of the beginning of a poem/song from Edith Sitwell's *Facade*:

(B) déʸzi æn líli

léʸzi æn sílɪ

And so does the following rendition of the beginning of another *Facade* piece:

(C) kráyd ðə néʸvi bɫúʷ góʷst

əv místr̩ bəléʸkər

ði əlégro nígro kʰák'tʰèl šékr̩

However, if (A) ended in [fǽk'] it would not count as a full rhyme; nor would (B) if it ended in [síli]; nor would (C) if it ended in [šékl̩].

1. Why are (A)-(C) acceptable rhymes in English, and these not?
2. How would you revise Beckson and Ganz's definition of full rhyme? Why?

Some remarks on the exercises. A substantial number of students will give answers like the following to the final question in the exercises: respectively, 'an unintentional transposition of sounds in spoken language, with these sounds changed to fit their new places'; 'take the first sound of each word and put it on the end and add a and then apply the allophonic rules of English'; 'the final accented vowel of the rhyming words and all succeeding sounds are identical, except for phonetic features due to surrounding sounds'. A reference to the 'allophonic rules' of English is precise but not always correct, due to the directionality of these processes (e.g., there is a process devoicing l after p, but none voicing l̥ word-initially, but the latter process is what would be required for example (A) in the pig latin exercise). A reference to contextually determined changes in sounds is a great deal vaguer and fails to mention the language- and dialect-particular character of these changes. All three answers treat the contextual determination as fortuitously connected to the phenomena at hand, indeed as an effect that wouldn't have to happen at all. Referring to phonemes gives a BETTER answer in each case. (This is one place to introduce the lesson that some answers may be better than others, even if they're all factually adequate, a lesson that some students--who object to the importation of 'aesthetic' criteria into a 'scientific' enterprise--resist with passion.)

Titling the first of these exercises 'Sounds and Phonemes', or anything with the word PHONEME in it, increases the percentage of 'right' answers, but perhaps for the wrong reason.

Such exercises can be distributed over class discussions, homework, and examinations. I usually save one for a review homework assignment or an examination, where it can recall the student's mind to a type of reasoning previously used without asking for a mechanical replay of an earlier answer.

Finally, I stress the importance of the 'why' in the final questions of these exercises, if necessary assigning an actual point value to a brief defense of the answer given. (This is one place to introduce the lesson that a presentation of the evidence for some answer is usually more important than the answer itself, again a lesson that some students--who object that a linguistics course is not a course in thinking or writing--view with distaste.)

III. Features

Here the stickiest point is the connection between the descriptors of phonetics and the features of phonology. Most linguistics textbooks develop separate vocabularies of descriptors and features, despite the evident overlap between the two; some typographical distinction (initial capitalization, italics, small caps) then has to bear the burden of distinguishing, say, the feature 'Nasal' from the descriptor 'nasal'. One text--*Linguistics: An Introduction to Language and Communication*, by Adrian Akmajian, Richard A. Demers, and Robert M. Harnish (MIT Press, 1979)--a text with several admirable chapters, moves from phonetic descriptors to phonological features within the space of a few pages in a single chapter, thereby confusing all but the brightest students and alienating all but the most passive.

One motivation for this double vocabulary is probably that descriptors are believed to be phonetic, anatomic, physiological (or perhaps acoustic), while features are believed to be phonological, mental, abstract. I see no reason to characterize the distinction in these terms. Surely the descriptors are abstract also: there is nothing anatomically in common to the many physical gestures that result in stop consonants; the tongue-root advancement associated with phonetically 'wide' or 'tense' vowels results in some raising and fronting of the tongue body, but phonetically wide vowels are not thereby classified also as high and front; the acoustic activity during a voiceless stop consonant is indistinguishable from an equally long pause; all the suprasegmental descriptors are inherently relative; 'there is no agreed physical measurement corresponding to syllabicity. But there is no doubt that segments can be described phonetically as being syllabic (100 percent) or nonsyllabic (0 percent)', according to Peter Ladefoged's *Course in Phonetics* (Harcourt Brace Jovanovich, 1975), p. 267; and so on.

The question is then whether there should be two abstract categorizations or only one. As a PEDAGOGICAL question, the answer ought to be that we would accept more than one abstract categorization only for the strongest of (pedagogical) reasons. This is just the sort of situation in which introductory texts do well to oversimplify; there are things it is better to conceal for a while, lest the students sink into a quicksand of conceptual and terminological refinements. Even as a THEORETICAL question, it seems to me, the answer ought to be that we would accept more than one abstract categorization only for the strongest of (theoretical) reasons. For theoretical purposes, we need a vocabulary (applicable to all languages) for naming natural classes of segments and natural relationships among segments and for describing the phonetic distinctions between phonemes; descriptors that serve none of these functions have no place in linguistic phonetics, and if we are fortunate a single set of descriptors will suffice for all of these functions.

My approach to descriptors and features in an introductory class is therefore unified, with a single vocabulary for 'phonetic properties'. Two types of exercises help the students gain some facility with this vocabulary. The first type focusses on phonetic properties and NATURAL CLASSES/RELATIONSHIPS, the second on phonetic properties and PHONEMIC DISTINCTIONS.

In exercises of the first type, the student is provided with positive instances of some phenomenon (and usually with negative instances as well) and is asked to supply the appropriate generalization. The form of such exercises is introduced in my initial discussion of phonetic properties, as in the text below.

Consider the statement in (1) below. How can we replace the second part of the statement (the part after the dots) so as to make it GENERAL, not merely a list of words that do one thing as opposed to a list of words that do something else?

(1) The English indefinite article is ən rather than ə...

before the words *ermine*, *easy*, *old*, *Australian*, *honor*, *enormous*, *ivy*, *ounce*, *added*, *awesome*, *herb*, *approximate*, and *early* (but is ə before *useful*, *history*, *radio*, *performer*, *European*, *dish*, *washer*, *fertile*, and *night*).

The generalization has to do with the type of sound that begins the word following the indefinite article: the first list consists entirely of words beginning with 'vowel' sounds, the second consists entirely of words beginning with 'consonant' sounds. (You should be able to give a convincing argument from these examples that it is SOUNDS and not LETTERS that are relevant.)

A slight complication is introduced here by the fact that *ermine*, *herb*, and *early* are in the ən list, while *radio* is in the ə list. For most American English speakers, the sound at the beginning of *ermine* is articulated just like the sound at the beginning of *radio*; for these speakers, *ermine* does not PHYSICALLY begin with a vowel followed by *r*. Yet the *r* at the beginning of *ermine*, like the *r* in the middle of *bird* and the *r* at the end of *butter*, counts as making a syllable, while the *r* at the beginning of *radio* does not. *Stirring* has an *ermine*-type *r*, and two syllables, while *string* has a *radio*-type *r*, and only one syllable. Now normally it is the function of VOWELS to make syllables, so that *ermine*, *stirring*, *butter*, and *bird* all have the consonant r 'acting like' a vowel; many English speakers also have an l acting like a vowel in *kettle*, an n acting like a vowel in *kitten*, and an m acting like a vowel in *bottom*. What all this adds up to is that the phonetic classification VOWEL/CONSONANT is not quite what we want in describing what's going on in (1). Instead, we want a distinction between sounds that make syllables and those that do not--between SYLLABICS and NONSYLLABICS. The generalization that completes the first part of (1) correctly is

(1') ... before syllabics.

Further complete-the-generalization problems introduce such properties as LABIAL, CORONAL, and SIBILANT, while the STOP/CONTINUANT and OBSTRUENT/SONORANT distinctions are described and briefly justified without exemplification in a problem. (Properties like ALVEOLAR, LIQUID, FRICATIVE, APPROXIMANT, VOICELESS/VOICED, and NASAL, which distinguish English phonemes, have already been introduced.) At this point the students are given a series of exercises of the complete-the-generalization form, arranged roughly in order of complexity. Some examples follow.

(8) At the beginning of a word before l or r, the only fricatives permissible in English are ...

the ones in *shred*, *slop*, *flicker*, *frazzled*, *slide*, *frog*, *thread* (so that **zlop*, **vlicker*, and **vrog* are not possible words, nor is *thread* if pronounced with the initial consonant of *this* rather than the initial consonant of *think*).

(11) Some American English speakers have ɛᵊ rather than æ ...

in *rash*, *has*, *gather*, *bath*, *raft*, *gas*, *castle*, *jazz* (but have æ in *fat*, *gap*, *stack*, *batch*).

(13) Some American English speakers (largely in the Midwest and South) pronounce ɛ as ɪ ...

in *then*, *Kenney*, *pen*, *Bengals*, *gem*, *Mencken*, *Remington*, and *temperature* (while maintaining ɛ in *met*, *wedding*, *beggar*, *best*, *gel*, *merry*, *kept*, and *mesh*).

(18) English speakers have slightly labialized variants of word-initial consonants ...

in *toot*, *pooch*, *boat*, *known*, *cook*, *good*, *so*, *tall*, *fought*, *Shawn*, *pull* (but not in *team*, *pet*, *bait*, *name*, *father*, *give*, *say*, *Cal*, *fat*, *sham*, *pill*, *cut*, *birth*).

(24) Especially before words beginning with consonants, many Americans sometimes do not pronounce word-final ...

consonants in *six*, *leads*, *past*, *gift*, *act*, *meant*, *mend*, *hold* (though they do pronounce the word-final consonants in *branch*, *Welsh*, *mask*, *filth*, and *lisp*).

(31) Most speakers of English do not pronounce ...

a word-final b in *limb* and *thumb* or a word-final g in *wing* and *rung* (though they do pronounce the word-final consonants in *limp*, *thump*, *wink*, *drunk*, *lend*, *bond*, *rant*, *branch*, *lab*, and *rag*).

(32) Some Southern Ohio and Indiana speakers replace ...

the vowel of *met* by the vowel of *mate* in *special*, *measure*, *pleasure*, *mesh*, *precious* (but not in *mess*, *fettle*, *retch*, *methyl*, *pestle*, *wed*) and the vowel of *mitt* by the vowel of *meet* in *commission*, *fish*, *partition*, *elision*, *derision* (but not in *miss*, *fiddle*, *midge*, *nifty*, *whistle*, *sit*).

A few comments on this sort of exercise. The phenomena illustrated include dialect variants (some of which can be referred to again in a later discussion of historical change), casual speech variants (some of which can be used in sociolinguistics and/or in historical change), ordinary allophonic variants, phonologically conditioned morphophonemic variants, and constraints on phoneme combinations. Consequently, no framing brackets of any sort appear in the exercises.

The material to be replaced has forms cited in ordinary English spelling. This is deliberate. These exercises give students additional practice in phonemic transcription, at which they are probably shaky.

It may be necessary to give some explicit advice about solving specially designed problems like these: (a) these problems are so designed that there IS a general solution (a right answer covers all the cases, and there are no 'exceptions'); (b) all the information needed to get a solution is available in the problem statement (so that if there is no way to tell what pitch level particular words are spoken on, say, then this factor cannot be relevant to the answer); (c) such problems are ordinarily designed to have strikingly simple answers (so that if your proposed answer has several clauses in it, or rivals the problem statement itself in length, there is probably a better answer); (d) if there is negative evidence given, it is important (the devisers of such problems don't throw in whole categories of facts just for fun); (e) if your current hypothesis begins to look unpromising, try another, remembering that sometimes you might want to go back to an earlier idea.

After students have had a reasonable amount of experience with exercises like those above, it is possible to expand the range of exercises to include types that must be presented in transcription: data in languages other than English (indeed, standard phonemics problems can usually be recast in the format of (1) above), data from the acquisition of English by young children, and data from historical change.

I turn now to exercises focussed on phonetic properties as phoneme discriminators. First, a paragraph of introductory text.

The properties that define natural classes--for instance, voicing, nasality, continuancy, and point of articulation for consonants and height, frontness, and rounding for vowels--often act as independent elements of linguistic structure, so that individual sounds or phonemes must be viewed as 'broken down' into an assemblage of these properties. The English phoneme /p/ would then be seen as an assemblage of the properties VOICELESS, LABIAL, and STOP, therefore as distinguished from /b/ and /m/ as being voiceless rather than voiced, from /t/ and /k/ by being labial rather than alveolar or velar, from /f/ by being a stop rather than a continuant, and from other English phonemes by differences in two or more of these properties.

Exercise A.

Below is a list of slips of the tongue (from the collection in Victoria Fromkin's *Speech Errors as Linguistic Evidence* (Mouton, 1973)). Using appropriate phonetic terminology, describe what has happened in each of these errors. Do not merely say, "The speaker said m instead of b and said d instead of n," and the like, but look for some REASON why these particular errors should have been made. Hint: there is a sense in which all these errors are of the same type. Further hint: these errors are similar, in a way, to the common type of error known as the SPOONERISM (*my queer dean* FOR *my dear queen*; *you have hissed my mystery lectures* FOR *you have missed my history lectures*; *stretch and piss* FOR *stress and pitch*).

	INTENDED TARGET	ACTUAL UTTERANCE
a.	Cedars of Lebanon	Cedars of Lemadon
b.	Terry and Julia	Derry and Chulia /čulyə/
c.	big and fat	pig and vat
d.	clear blue sky	glear plue sky
e.	pedestrian	tebestrian
f.	scatterbrain	spattergrain

Exercise B.

According to Thrall, Hibbard, and Holman, *A Handbook to Literature* (Odyssey Press, revised ed., 1970), a *pun* is

> A play on words based on the similarity of sound between two words with different meanings. An example is Thomas Hood's: "They went and told the sexton and the sexton tolled the bell."

Their example is an instance of what I will call a PERFECT PUN, a play on words based on the phonological identity (or HOMOPHONY) of two words with different meanings. Below are some examples of perfect puns from John S. Crosbie's *Dictionary of Puns* (Harmony Books, 1977):

(1) bound

The zoo's kangaroo lacks zip: He is frequently discovered out of bounds.

(2) clap

VD is nothing to clap about.

(3) prone

We are all prone to die.

(4) worn

"Is anything worn under your kilt?"

"No, it's all in working order."

Very often, however, puns are less than perfect. Sometimes the difference between a syllabic and a nonsyllabic consonant is disregarded, as in these examples from Crosbie:

(5) mower

If you can't afford a power lawnmower, then mower power to you.

(6) wire

As the tightrope walker asked himself, "Wire we here?"

And sometimes the difference has to do with where words are divided:

(7) stripper

He was afraid to go out with the burlesque queen because he didn't know how to stripper.

(8) tall

It is better to have loved a short girl than never to have loved a tall.

And sometimes the difference has to do with whether there is a consonant or nothing at all.

(9) cling

Wrestling is the sport of clings.

(10) sequel

A wolf is a man who treats all women as sequels.

And sometimes--especially when the original expression is a well-known expression--the difference is very great:

(11) bovine

There once was a tolerant cow who stood for absolutely anything her favorite bull tried to get away with. She mooed, "Too err is human, to forgive, bovine."

(12) Persian

One man's Mede is another man's Persian.

Usually, however, in imperfect puns the difference is quite small, as in:

(13) clothe

Sign by gate to nudist colony: "Come in. We Are Never Clothed."

Consider the examples below (also from Crosbie): for each, identify the punning word in the example (*clothed* in (13)) and the word it puns on (*closed* in (13)); then identify the distinct phonemes that are matched in the pun (here, ð and z), and say what phonetic properties distinguish these phonemes (here, a difference in point of articulation, interdental versus alveolar).

(14) crab

Once there was a girl
Who kept fishing for a pearl,
But her chances were drab for it--
Until she made a crab for it.

(15) fever

Oliver Wendell Holmes, Sr., was a physician as well as an author and lecturer. He is said to have remarked of his medical career that he was grateful for small fevers.

(16) money

Sign outside an amusement park: "Children under 14 must be accompanied by money and daddy."

(17) radish

Health food can give you a radish complexion.

(18) choker

Mrs. reported to Mr.: "It says here that a man on the next block throttled his mother-in-law yesterday." "Hmmm," mused Mr., "sounds to me like he was a practical choker."

(19) bleach

When the blonde he married faded into brunette, he sued for bleach of promise.

(20) curl

Labia majora: the curly gates.

(21) sicken

"Aha!" cried Sherlock Holmes, "the plot sickens!"

(22) bottle

When it came to drinking, comedian W. C. Fields was a veteran who suffered from bottle fatigue.

(23) sylph

Why is it that many a woman with a sylphlike figure insists on keeping it to her sylph?

(24) clash

The late poet J. Ogden Nash
Always made of his English a hash.
When asked where it led
He flippantly said,
"It gives it a great touch of clash."

(25) sty

For many a farmer the price of pork has created a gold mine in the sty.

Sometimes imperfect puns involve differences in two or even three places, as in the following examples. Analyze these as you did (14)-(25), treating each corresponding pair of distinct phonemes separately.

(26) rabbit

Fast, speedy (as in Rabbit Transit).

(27) crass

... It is a platitude
That only a halter
Can alter
The middlecrass assitude.

(28) breeze

In Chicago, every prospect breezes.

(29) morsel

What foods these morsels be!

(30) mutton

Lamb stew is much ado about mutton.

Exercise C.

Most familiar verse in English uses FULL RHYME: the peak of the last accented syllable of a line, plus everything that follows that peak, is identical to the peak of the last accented syllable of a matching line, plus everything that follows it--

(1) Lizzie Borden took an axe
And gave her mother forty whacks.
(American verse of unknown authorship)

(2) I'm just a poor wayfaring stranger,
A-trav'ling through this world of woe;
But there's no sickness, toil nor danger
In that bright world to which I go.
('Wayfaring Stranger', #97 in Alan Lomax,
Folk Song U.S.A., New American Library,
1975)

But some verse--especially traditional English ballads, nursery rhymes, blues lyrics, and the lyrics of rock music--frequently uses HALF RHYME, in which the matched parts are not entirely identical. In many such cases, a consonant counts as rhyming with a cluster including that consonant--

(3) [n-nd]

Well lookin' for a woman
an' a well oh man
is just lookin' for a needle
that is lost in the sand
(Dylan, 'Just Allow Me One More Chance')

(4) [d-nd]

She left one too many a boy behind
He committed suicide
(Dylan, 'Gypsy Lou')

or a word ending in a vowel counts as rhyming with one ending in that vowel plus some consonant--

(5) [o-od]

I stood a wondering which way to go,
I lit a cigarette on a parking meter
And walked on down the road.
(Dylan, 'Talkin' World War III Blues')

In other cases, distinct consonants count as rhyming, or distinct vowels count as rhyming. In each of the examples below you are to pick out the distinct phonemes that are counted as rhyming in the italicized word (remember that material BEFORE the peak of the last accented syllable will of course be different, as in the full rhymes *axe-whacks* and *stranger-danger* and the half rhymes *man-sand*, *behind-suicide*, and *go-road*), and you are to say what phonetic properties distinguish those matched but different phonemes.

(6) The things that sit and wait for you
To stumble in the dark
Will take the cobwebs from your eyes
And plant them in your heart.
(Byrd, 'The Elephant at the Door')

(7) Going where the orange sun has never died,
And your swirling, marble eyes shine laughing,
Burning blue the light.
(Lamm, 'Fancy Colours')

(8) Farewell to Greer County where blizzards arise,
Where the sun never sinks and the flea never dies,
And the wind never ceases but always remains
Till it starves us all out on our government claims.
('Starving to Death on a Government Claim',
#70 in Lomax)

(9) [This is a full rhyme in some dialects.]

Some of us were willing, while others they were not.
For to work on jams on Sunday they did not think they'd ought.
('The Jam on Gerry's Rocks', #50 in Lomax)

(10) Tying faith between our teeth
Sleeping in that old abandoned beach house
Getting wasted in the heat
(Springsteen, 'Backstreets')

(11) Well the technical manual's busy
She's not going to fix it up too easy.
(Mitchell, 'Electricity')

(12) Old Reilly stole a stallion
But they caught him and brought him back
And they laid him down on the jail house ground
With an iron chain around his neck.
(Dylan, 'Seven Curses')

(13) Git out the way, ol' Dan Tucker,
You too late to git yo' supper.
('Old Dan Tucker', #27 in Lomax)

(14) Oh, yes, I am wise
but it's wisdom born of pain,
Yes, I paid the price
but look how much I gained.
(Reddy, 'I am Woman')

(15) I'll remember Frank Lloyd Wright.
All of the nights we'd harmonize till dawn.
I never laughed so long.
(Simon, 'So Long, Frank Lloyd Wright')

(16) My experience was limited and underfed,
You were talking while I hid
To the one who was the father of your kid.
(Dylan, 'Love is Just a Four Letter Word')

(17) Like dust in the wind you're gone forever
You're wind-blown leaves you're a change in the weather
(Taylor, 'Something's Wrong')

(18) Love my wife, love my baby,
Love my biscuits sopped in gravy
('Blackeyed Susie', #29 in Lomax)

All the types of exercises I have illustrated are consistent with a number of different ways of treating phonemes and features. They are neutral with respect to the question of whether 'phonemic representation' is to be treated as essentially identical to 'morphophonemic underlying form' in an introductory linguistics course (not my ordinary practice) and with respect to the question of whether distinctive features are binary or not (the system being developed in the material above LOOKS nonbinary but can be fashioned into a binary system with little trouble). They can be used with various formalisms, or in a setting where students are instructed to give answers in ordinary but precise English, using the technical terms of linguistics where appropriate (my own preference, especially since this approach allows me to finesse the issues of redundant and unspecified features, two technical matters that generate a surprising amount of anxiety in students who want to get everything right). On the minus side, they present special difficulties to the non-native speaker of English, and must be revised depending upon the dialect make-up of the class. But then it is hard to think of a way of introducing phonology that is free of both of these drawbacks.

Appendix: Sample Answers

II. Phonemes

Exercise for (g):

1. [tɪ̃ŋk spʰɛ̃mz]
   [fãỹd wɪnt]

2. [tʰɪ̃ŋk spɛ̃mz]
   [fayd wɪ̃nt]

3. An unintentional transposition of phonemes in spoken language. If we say that it is SOUNDS that are transposed, then we predict incorrect sequences of sounds in actual pronunciations; but if we say that it is PHONEMES that are transposed, then the correct allophones of these phonemes are automatically predicted.

Exercise for (h):

1. [tapseʸ l̥eʸpʰeʸ]
   [r̥ayṭˢ·eʸ ɥuʷçeʸ]
   [oʷɨeʸ uʷɨkʷʰeʸ]

2. [tʰapseʸ leʸpeʸ]
   [rayteʸ yuʷheʸ]
   [oʷleʸ uʷɨkeʸ]

3. Take the first phoneme of each word and put it on the end and then add /e/. If we say that the SOUNDS are involved, then we predict incorrect sounds both at the beginnings of the pig latin words and before their final [eʸ]; but if we say that PHONEMES are involved, then the correct allophones are automatically predicted in both places.

Exercise for (i):

1. In (A)-(C) the matched sounds are allophones of the same phoneme or phoneme combination: /t/, /i/, and /ər/, respectively. But [kʼ] and [tʼ] are allophones of different phonemes, /k/ and /t/; and stressed [ɪ́] and [í] are allophones of different phonemes, /ɪ/ and /i/; and [r̩] and [l̩] are allophones of different phonemes, /r/ and /l/.

2. All succeeding phonemes are identical. If we required that succeeding SOUNDS be identical, then different sounds in free variation with one another wouldn't count as rhyming, any more than different sounds that are allophones of different phonemes do; they are all different sounds. But this is incorrect. If we require that succeeding PHONEMES be identical, then we predict (correctly) that different sounds in free variation count as the 'same sound' for the purposes of rhyme.

III. Features

(8) ... voiceless.

(11) ... before fricatives.

(13) ... before nasal consonants.

(18) ... before rounded vowels.

(24) ... alveolar consonants.

(31) ... a word-final peripheral [or noncoronal] voiced stop after a nasal.

(32) ... nonlow front lax vowels by their tense counterparts before posterior [or nonanterior, or more specifically, alveopalatal] fricatives.

Exercise A: In each case a single phonetic property has been transposed between one phoneme and another: in example a, nasality appears with the earlier bilabial consonant in *Lebanon* instead of the later alveolar one; in examples b and d, voicing appears with a word-initial consonant in an earlier word instead of a later one, and in example c, with a word-initial consonant on a later word instead of an earlier one; and in examples e and f, the points of articulation for two consonants in a word have been exchanged. In every case all other phonetic properties of the consonants affected remain unchanged.

Exercise B:

(14) *crab* punning on *grab*; k and g; voicing (voiceless versus voiced).

(15) *fevers* punning on *favors*; i and e; height (high versus mid).

(16) *money* punning on *mummy*; n and m; point of articulation (bilabial versus alveolar).

(17) *radish* punning on *reddish*; æ and ɛ; height (low versus mid).

(18) *choker* punning on *joker*; č and ǰ; voicing (voiceless versus voiced).

(19) *bleach* punning on *breach*; l and r; point of articulation (alveolar versus postalveolar), tongue configuration (lateral versus retroflex).

(20) *curly* punning on *pearly*; k and p; point of articulation (velar versus bilabial).

(21) *sickens* punning on *thickens*; s and θ; point of articulation (alveolar versus (inter)dental).

(22) *bottle* punning on *battle*; a and æ; frontness (back versus front).

(23) *sylph* punning on *self*; ɪ and ɛ; height (high versus mid).

(24) *clash* punning on *class*; š and s; point of articulation ((alveo) palatal versus alveolar).

(25) *sty* punning on *sky*; t and k; point of articulation (alveolar versus velar).

(26) *rabbit* punning on *rapid*; b and p, t and d; voicing (voiced versus voiceless), voicing (voiceless versus voiced)--cf. Exercise A.

(27) *middlecrass assitude* punning on *middleclass attitude*; r and l, s and t; point of articulation (but see (19) above), manner of articulation (fricative versus stop).

(28) *breezes* punning on *pleases*; b and p, r and l; voicing (voiced versus voiceless), point of articulation (but see (19) above).

(29) *foods ... morsels* punning on *fools ... mortals*; d and l, s and t; manner of articulation (stop versus liquid), manner of articulation (fricative versus stop).

(30) *mutton* punning on *nothing*; m and n, t and θ, n and ŋ; point of articulation (bilabial versus alveolar), point and manner of articulation (alveolar stop versus (inter)dental fricative), point of articulation (alveolar versus velar).

Exercise C:

(6) k and t, velar versus alveolar.

(7) d and t, voiced versus voiceless.

(8) n and m, alveolar versus bilabial.

(9) a and ɔ, unrounded versus rounded.

(10) θ and t, (inter)dental fricative versus alveolar stop.

(11) ɪ and i, lax versus tense.

(12) æ and ɛ, low versus mid.

(13) k and p, velar versus bilabial.

(14) z and s, voiced versus voiceless.

(15) n and ŋ, alveolar versus velar.

(16) ɛ and ɪ, mid versus high.

(17) v and ð, labiodental versus (inter)dental.

(18) b and v, bilabial stop versus labiodental fricative.

FOOTNOTE

*The material presented here has benefited enormously from the comments and criticisms of Linguistics 601 students at Ohio State from 1972 on, and especially from the advice of my teaching assistants in this course. This paper was completed at the Center for Advanced Study in the Behavioral Sciences. I am grateful for financial support provided by the Spencer Foundation and for sabbatical leave from the Ohio State University.

Title	**Politics of Language**
Level	No prerequisites
Description	This course is based on the premise that if we understand that every discourse is political and that each of us has some political skill in the use of language, we will better understand both our intentions in dealing informally with one another, and the ways in which more influential people have learned to exalt these intuitive and homey skills to use as tactics of group persuasion.
Required Readings	Texts: Bolinger, D. Language: The Loaded Weapon. Goffman, E. Relations in Public. Newman, E. Strictly Speaking. Rodriguez, R. Hunger of Memory. Spender, D. Man-Made Language. Shaw, G.B. Pygmalion.
Syllabus	Linguistic and Prescriptive "Grammars" Micro-Politics of Language Macro-Politics of Language: Groups and Linguistic Choice Macro-Politics of Language: Persuasion and Power
Requirements	Four papers
Source	University of California-Berkeley Instructor: Robin Lakoff

Title	**The Power of Words**
Level	No prerequisite
Description	This course deals with various human interest aspects of linguistics. Topics covered include social judgements of nonstandard dialects, language and politics, and language and sexism. The language of advertising is examined. Cross-cultural differences in rules of taboo/euphemism, paralinguistic rules as well as kinesic, proxemic, and pragmatic rules are discussed. "Power talking" is analyzed in relation to doctor talk, legalese, bureaucratese, etc. The course also discusses various contro-versial issues such as the relationship between language and culture and/or thought, the feasibility of one world language, as well as current issues on bilingualism (competency tests for foreign teaching assistants and/or immigrants, English-only laws, etc.).
Required Readings	Text: Chaika, Elaine. 1982. Language: The Social Mirror. Cambridge, MA: Newbury House. Goshgarian, Gary, ed. 1986. Exploring Language. 4th ed. Boston, MA: Little, Brown and Co.
Syllabus	Introduction Subfields of Linguistics Traits of Language Prescriptive vs Descriptive Language Dialects Language Sociolects Standard vs Nonstandard Language and Thought Language and Culture Bilingualism Language and Ethnic/Racial Prejudice Political Language and Propaganda Artificial Languages Advertising Language and Subliminal Advertising Language and Sexism Taboo and Euphemism Slang and Jargon Writing Pragmatics Paralanguage Kinesics and Proxemics
Requirements	Three exams.
Source	University of Wisconsin-Milwaukee Instructor: Jennifer Petersen

Title **Psycholinguistics**

Level Prerequisite: Introduction to Linguistics or Introduction to Psychology or permission of instructor.

Description Survey of approaches to the nature of language processing. Topics include: biological and neurological prerequisites for language, speech perception; syntactic and lexical processing; aphasia; and child language. Psychological evidence for theoretical linguistic assumptions is considered.

Required Reading Text: Tartter, V.C. Language Processes.

Suggested Readings

Berko, J. "The child's learning of English morphology." In S. Saporta, ed., Psycholinguistics.
Bever, T. "The cognitive bases for linguistic structures." In Hayes, ed., Cognition and the Development of Language.
Blumstein, S.E., W. Milberg, and R. Shrier. 1982. "Semantic processing in aphasia: Evidence from an auditory lexical decision task." Brain and Language; 17: 301-15.
Blumstein, .E. and K.N. Stevens. 1981. "Phonetic features and acoustic invariance in speech." Cognition; 10: 25-32.
Blumstein, S.E. "Neurolinguistics: Language-brain relationships." In S.B. Filskov and R. J. Boel, eds., Handbook of Clinical Neuropsychology.
Chomsky, N. On the Acquisition of Syntax in Children.
Eimas, et al. 1971. "Speech perception in infants." Science; 171: 303-6.
Geschwind, N. 1964. "The development of the brain and the evolution of language." In Georgetown Monograph Series on Language and Linguistics, pp. 155-59.
Horton and Jenkins. The Perception of Language.
Jakobovits and Miron. Readings in the Psychology of Language.
Liberman, A., F.S. Cooper, D. Shankweiler, and M. Studdert-Kennedy. 1967. "The perception of the speech code." Psychological Review; 74: 431-61.
Lieberman, P. 1971. "On the speech of Neanderthal man." Linguistic Inquiry; 2: 203-22.
Linebarger, M., M. Schwartz, and E. Saffran. 1983. "Sensitivity of grammatical structure in so-called agrammatic aphasics." Cognition; 13: 361-92.
Sarno, M.T. Acquired Aphasia.
Swinney, D. "The structure and time course of information interaction during speech comprehension, lexical representation, access, and interpretation." In J. Mehler, E. Walker, and M. Garrett, eds., Perspectives in Mental Representations.
Swinney, D. and D. Hakes. 1976. "Effects of prior context upon lexical access during sentence comprehension." Journal of Verbal Learning and Verbal Behavior; 15: 681-89.
Tannenhaus and Seidenberg. "Do listeners compute linguistic representations?" (manuscript).
Tartter, V.C. The Modularity of Mind.
Wanner, E. and L. Gleitman. Language Acquisition: The State of the Art.
Zurif, E.B., A. Caramazza, R. Myerson, and J. Galvin. 1974. "Semantic feature representations in normal and aphasic language." Brain and Language; 1: 167-87.
Zurif, E.B., A. Caramazza, and R. Myerson. 1972. "Grammatical judgements of agrammatic aphasics." Neuropsychologia; 10:

405-17.

Syllabus

- Foundations for Psycholinguistics
  - A Theory of Language-Modularity
  - Language Communications Systems
  - Neurological and Biological Bases of Language
- Speech Processing
  - Levels of Speech Processing
  - Hemispheric Specialization for Speech
- Sentence Comprehension
  - Levels of Grammatical Processing
  - Role of Lexical Cues in Sentence Processing
  - On-Line Sentence Processing
  - Prose Processing
- Pathologies of Language - Aphasia
  - Introduction
  - Clinical Types of Aphasia
  - Psycholinguistic Approaches to Aphasia
- Child Language Acquisition
  - Linguistic Aspects
  - Cognitive Aspects

Requirements Midterm, term paper, final examination.

Source Brown University
Instructor: Sherry Baum

Title **Psychology of Language**

Description The orientation of this course, and of the field of psycholinguistics, is interdisciplinary--drawing on research and theories from linguistics, psychology, and related disciplines. The first section of the course will consist of an introduction to the field of psycholinguistics and some of the major approaches that have shaped its development, including a consideration of the biological foundations of language. The relation between brain and language and the significance of research on communication skills in other primates will be addressed in this context. The second part of the course concerns the processes involved in comprehension including: speech perception and understanding; the representation of meaning; semantic memory; sentence and discourse processing; and models of discourse processing. The third section of the course will start with the study of reading and will examine language production including: evidence from slips of the tongue; the formulation of speech plans; sign language; conversational interaction; and the psycholinguistics of adult bilingualism. The final section will address some of the basic findings and theories of (first) language acquisition.

Required Readings Text: Carroll, D.W. 1986. Psychology of Language. Monterey, CA: Brooks/Cole.

Atkinson, M. 1985. "How linguistic is the one-word stage?" In M. Barrett, ed., Children's Single-Word Speech. Chichester, England: John Wiley and Sons. pp. 289-312.
Berndt, R.S., A. Caramazza, and E. Zurif. 1983. "Language functions: Syntax and semantics." In S.J. Segalowitz, ed., Language Functions and Brain Organization. New York, NY: Academic Press. pp. 5-28.
Bowerman, M. 1979. "The acquisition of complex sentences." In P. Fletcher and M. Garman, eds., Language Acquisition: Studies in First Language Development. Cambridge, England: Cambridge U Press. pp. 285-305.
Clark, H.H. and B.C. Malt. 1984. "Psychological constraints on language: A commentary on Bresnan and Kaplan and on Givon." In W. Kintsch, J.R. Miller, and P.G. Polson, eds., Method and Tactics in Cognitive Science. New York, NY: Academic Press. pp. 191-214.
Cole, R.A. and J. Jakimik. 1980. "A model of speech perception." In R.A. Cole, ed., Perception and Production of Fluent Speech. Hillsdale, NJ: Lawrence Erlbaum. pp. 133-63.
Crowder, R.G. 1982. The Psychology of Reading: An Introduction. New York, NY: Oxford U Press.
Dell, G.S. and P.A. Reich. 1981. "Stages in sentence production: An analysis of speech error data." Journal of Verbal Learning and Verbal Behavior; 20: 611-29.
Gibbs, R.W. 1979. "Contextual effects in understanding indirect requests." Discourse Processes; 2: 1-10.
Grosjean, F. 1982. Life with Two Languages. Cambridge, MA: Harvard U Press.
Hockett, C.F. 1960. "The origin of speech." In W. S-Y Wang, ed. 1982. Human Communication: Language and Its Psychological Bases. San Francisco, CA: W.H. Freeman.
Karmiloff-Smith, A. 1979. "Language development after five." In P. Fletcher and M. Garman, eds., Language Acquisition: Studies in First Language Development. Cambridge, England: Cambridge U Press. pp. 307-23.

Mandler, J. 1982. "Some uses and abuses of a story grammar." Discourse Processes; 5: 305-18.

Miller, G.A. 1964. 1967. "The psycholinguists." In G.A. Miller, ed., The Psychology of Communication. Baltimore, MD: Penguin. pp. 70-92.

Newman, J.E. 1985. "Processing spoken discourse: Effects of position and emphasis on judgements of textual coherence." Discourse Processes; 8: 205-27.

Schegloff, E.A. 1968. "Sequencing in conversational openings." American Anthropologist; 70: 1075-95.

Shatz, M. 1982. "On mechanisms of language acquisition: Can features of the linguistic environment account for development?" In E. Wanner and L.R. Gleitman, eds., Language Acquisition: The State of the Art. New York, NY: Cambridge U Press. pp. 102-27.

Swinney, D. 1984. "Theoretical and methodological issues in cognitive science: A psycholinguistic perspective." In W. Kintsch, J.R. Miller, and P.G. Polson, eds., Method and Tactics in Cognitive Science. Hillsdale, NJ: Lawrence Erlbaum. pp. 217-33.

Terrace, H.S. 1983. "Apes who 'talk': Language or projection of language by their teachers?" In J. deLuce and H.T. Wilder, eds., Language in Primates. New York, NY: Springer-Verlag; pp. 19-42.

Syllabus

What Is Psycholinguistics?
The Nature of Language
Information Processing and Cognition
Brain and Language
Hemispheric Differences
Perception of Isolated Speech Sounds
Understanding Fluent Speech
Representation of Meaning
Lexical Access
Sentence Comprehension
Discourse Coherence
Discourse Processing and Memory
Reading
Language Production
Sentence Production/Sign Language
Conversational Interaction
Schizophrenic Language/Bilingualism
Psycholinguistics of Bilingualism
Language Development

Requirements Midterm exam, final exam, position paper, research paper.

Source: University of New Mexico
Instructor: Jean E. Newman

Title	**Structure of Black English**
Level	Prerequisite: Introduction to Linguistics, Study of Language or permission of the department.
Description	This course is a survey of linguistic featues which make Black English distinctive from other varieties of English spoken in the USA, particularly network English. When possible, it will be compared to white nonstandard varieties of English (particularly "Southern English") to show how far their similarities go and where they end. We will focus particularly, but not exclusively, on its time reference system, the status of the copula, the forms and distributions of negators and of personal pronouns, the strategies of focusing, and the structures of relative clauses and interrogative sentences. Ethnographically, we will also discuss the contexts of use of Black English. From a historical point of view, we will also examine the two main hypotheses about its genesis: the dialectologist and the creolist hypotheses. The question of whether BE is structurally moving closer to or further away from white English will be addressed within the last perspective, even though synchronic discussions of its structural characteristics will have given good hints of what the answer should be.
Required Readings	Dillard, J.L. 1972. Black English: Its History and Usage in the United States.
Suggested Readings	Baugh, John. 1983. Black Street Speech: Its History, Structure, and Survival. Austin, TX: U TX Press.
Requirements	Midterm, final or term paper.
Source	University of Georgia Instructor: Salikoko S. Mufwene

Title	**Textual Analysis: Words, Images, Music**
Level	Prerequisites: Overview of the Field of Linguistics or Introductory Linguistics course
Description	How do we decode messages? Using techniques borrowed from linguistics and communication theory, the course will consider a broad variety of "texts," including commercials, songs, political speeches, films, paintings, poems, plays, buildings, and folk tales. In analyzing these texts, we will examine the processes which societies use to enlighten, to obscure, and to entertain. The text will be seen as both commodity and communicative act, and relationships among linguistic, visual, and musical codes will be stressed. The course will consist of team-taught lectures.
Required Readings	Scholes, Robert, et al. 1982. Elements of Literature, 5. New York, NY: Oxford U Press. Traugott, Elizabeth Closs and Mary Louise Pratt. 1980. Linguistics for Students of Literature. New York, NY: Harcourt Brace Jovanovich.
Suggested Readings	Eisenstein. "The Odessa Steps." Potemkin. Monaco. "Mediography." Umiker-Sebeok. "The Seven Ages of Women."
Syllabus	Language, Linguistics, and Textual Analysis The Text as Commodity Elements of Visual Language The Lexicon Text and Social Context Phonology Elements of Music Syntax Elements of Film Semantics and Role Relations Metaphor and Myth Pragmatics and Speech Act Theory Speech Genres Point of View Narrative and Ideological Structures Across Media
Requirements	Three tests, two written reports, class participation.
Source	University of Maryland-Baltimore County Instructors: Stanley McCray Angela Moorjani

Title Thinking Linguistics

Description This course encourages students to ask probing and meaningful questions about the nature of language and its inner workings, and to take some first steps toward finding answers. First, the course will look at the history of people's efforts to think about their language through the centuries, from the Greek philosophers to the very new school of "transformational" grammarians. Second, it looks in much greater detail at the latest theory of language, transformational grammar. Student will do problems as a modern linguist would, handling data and trying to see how they are relevant to the central questions raised most strikingly about language in the last thirty years. Finally, it will look at some "post-generative" developments in linguistics, such as meaning and pragmatics.

Required Readings Texts: Clark, Virgina, et al. 1985. Linguistics: Introductory Readings.

Heny, Jeannine and Frank Heny. Introduction to Linguistics. (manuscript).

Syllabus

Romans and Greeks
Empiricism versus Rationalism
The Nineteenth Century
Descriptive Linguistics
Chomsky and TG
The Language System (Transformational Grammar)
Word Formation in English
Competence and Performance
Arguing for Structures in Language
Building More Complex Structures
Meaning in Structure
Pronouns
Empty Categories
Move-Alpha: Language Patterns
Semantics
Beyond Semantics Proper: Language in Context

Requirements Written homework assignments, two midterms, one final.

Source University of North Carolina
Instructor: Jeannine Heny

Title	**Traditional Grammars**
Level	Prerequisite: 2.5 grade point average
Description	Review and evaluation of the principles of traditional grammar as reflected in the works of the best grammarians. Illustrations in several languages. Comparison of varieties of grammatical models used to describe these languages. Evaluation of degree to which a grammar developed essentially for Latin describes other languages, particularly non-Indoeuropean languages. Practice and evaluation of different models of parsing.
Required Readings	Texts: Curme. English Grammar. Palmer, F. Grammar.
Suggested Readings	Allen, R. L. English Grammars & English Grammar. Bryant, M. A Functional English Grammar. Jespersen, O. Essentials of English Grammar. Kruisinga, E. A Handbook of Present Day English.
Syllabus	Grammar Traditional Grammar Parts of Speech Tense and Voice Mood and Aspect Sentence Subject Predicate Complex Sentence
Requirements	Class reports, term paper, quizzes and assignments, class participation
Source	University of Florida Instructor: Paul Kotey

INNOVATIONS IN LINGUISTICS EDUCATION 2.2 (1982), 77-98.

WORD ACCENT, PHRASE ACCENT, AND METER*

Arnold M. Zwicky

Ohio State University

0. The material below, consisting of text with twelve interspersed exercises, was originally written as an essentially self-contained introduction to word accent (that is, for English, stress), phrase accent, and meter, to be used as supplementary material in an upper-division/graduate introduction to linguistics. Students frequently evince interest in these topics, and students with literary interests genuinely need something to tie what they know about poetry to what they are learning about linguistics. As it happens, I haven't been able to insert this unit into the already crowded agenda of the course, but Nancy Levin has used a version of it in an undergraduate introduction to phonology course in the English Department at the State University College of New York at Fredonia, with a good response from her students. Sample answers are provided in an appendix.

Some of the exercises are designed to get the student used to listening and to using the notation, that is, to get the student acquainted with the concepts. A number ask for generalizations. I believe that the 'formulate a principle' or 'make a generalization' task is so central in learning anything about language that I introduce exercises of this sort as soon as possible--here, in exercise 2. The non-English word accent exercises (4-6) illustrate the three most common types of fixed accent systems, and the generalization usually stands out so clearly that students are able to disregard the unfamiliar spelling systems and exotic symbols. (Note that the text always talks about accent on *syllables*. Repeated use of this locution is supposed to lead students away from contemplating answers framed in terms of vowels, consonants, or worse, letters. Students who don't read the text, and a few overingenious types, will not be deterred, however.) The final three exercises involve using the notation, making generalizations, and giving evidence for claims. They stress a view of verse as pattern plus an allowable range of deviation, and they introduce generalizations involving frequency rather than occurrence/nonoccurrence. The humorous and/or popular character of the examples is intended to help keep the student alert in the midst of all this.

An important characteristic of words, in a great many languages, is that certain syllables stand out more than others--certain syllables are *accented*, and others are not. The most common situation is for there to be only one accented syllable per word, as in the English words *below* (accented on the last syllable), *silly* and *parable* (accented on the first), and *examine* and *inaccurate* (accented on the second). Even in languages (like English) that have words with more than one accented syllable, most common words have only one accented syllable. In addition, it is usually the case

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in such languages that when there is more than one accented syllable in a word, one of them predominates: *snowman* has two accented syllables, the first more prominent than the second; *monsoon* is similar, but the second syllable is more prominent; *hurricane* has the primary accent on the first syllable, but a secondary accent on the last; *inexact* has the reverse pattern, with a subsidiary accent on the first syllable and the main accent on the last; *Montana* has the accent pattern secondary-primary-weak; *category* has the pattern primary-weak-secondary-weak; *parasitic* has secondary-weak-primary-weak; *aquamarine* has secondary-weak-weak-primary; and other patterns are possible.

At this point it is clear that some notation for these various accent levels would be useful. Several systems are in use: one employs marks ultimately due to Classical Greek metrics (an 'acute' mark ´ for primary accent, a 'grave' mark ` for secondary accent, and either no mark or a 'breve' ˘ for weakly accented, or so-called 'unaccented', syllables); another employs numerals (a 1 for primary accent, a 2 for secondary accent, and either no mark or a zero for unaccented syllables). In the second system, the accent patterns of the examples already given are as follows:

2 syllables	0 1 below 2 1 monsoon	—	1 0 silly 1 2 snowman
3 syllables	— 2 0 1 inexact	0 1 0 examine 2 1 0 Montana	1 0 0 parable 1 0 2 hurricane
4 syllables	2 0 0 1 aquamarine	2 0 1 0 parasitic	1 0 2 0 category
	primary accent on last syllable	primary accent on next-to-last syllable	primary accent on first syllable

There are other possible accentuations for four-syllable words in English: 0 2 0 1, in *comedienne* and *inopportune*, alongside 2 0 0 1 in the table; 2 0 1 2 in *anticyclone*, alongside 2 0 1 0 above, and 1 0 0 2 in *alphabetize*, alongside 1 0 2 0 above; and several patterns with primary accent on the *second* syllable--0 1 0 0 in *mechanical* and *inaccurate*, 2 1 0 0 in *cantankerous*, and 2 1 0 2 in *misdecorate*.

Exercises

1. Assign accent patterns to the following English words. Do *not* look them up in a dictionary; say them *out loud*, or have a friend read them out loud to you, perhaps several times, and listen carefully.

kaleidoscope
canoe
commentator
accent
parrot
pervert [noun]
pervert [verb]

Tennessee
maniac
canopy
bandanna
despotic
telegraph
telegraphy
telegraphic

2. English has no words with the accent pattern 0 0 1--hence the blank in the table right above *inexact*. There also aren't any 0 0 0 1 words (otherwise like *aquamarine*, but with weakly accented first syllable) or any 0 0 1 0 words (otherwise like *parasitic*, but with weakly accented first syllable), or any 0 0 1 2 words (otherwise like *anticyclone*, but with weakly accented first syllable). Formulate one principle that disallows these patterns, while permitting the other patterns that are illustrated above.

A syllable with secondary accent has an ambiguous status in English. On the one hand, it has less accent than the syllable with primary accent, so that it can count as *not* accented. On the other hand, it is more prominent than unaccented syllables, so that it can count as *accented*. This ambiguity is widely exploited in English verse, where syllables with secondary accents sometimes count as unaccented, sometimes as accented. This is easily seen in nursery verse, where a word like *Banbury* (1 2 0) sometimes counts as having only one accented syllable--

(1) Ríde ă cŏck-hórse tŏ Bánbŭry̆ Cróss

Tŏ búy lĭttlĕ Jóhnny̆ ă gállŏpĭng hórse

and sometimes as having two--

(2) Ăs Í wăs góing tŏ Bánbúry̆

Ŭpón ă súmmĕr's dáy,

My̆ dáme hăd búttĕr, éggs, ănd frúit,

Ănd Í hăd córn ănd háy.

(rhymes 28 and 27 in Opie and Opie, *The Oxford Dictionary of Nursery Rhymes*).

So far I've treated English word accent intuitively, trusting that your own feelings about which syllables are most prominent will agree with mine (though I should point out that some people who produce and perceive accent levels perfectly well in ordinary circumstances have a lot of trouble making explicit judgments about these levels; there is, unfortunately, no guarantee that being able to do something means you can describe what it is you're doing). But what is the physical reality corresponding to these accent levels? The matter turns out to be quite complex. The subjective impression that accented syllables are *louder* than unaccented is not very reliable; the *pitch* of the syllable and its *duration* are better indicators of accent in English, with higher pitch and extra length being associated with accent (see the survey in Lehiste, *Suprasegmentals*, sec. 4.4). Such a complex system of signalling accent through a combination of pitch, duration, and loudness is known as *stress accent*, or simply *stress*. It is to be contrasted with systems that use only pitch (*pitch accent*)[1] as the indicator of prominence on specific syllables. Japanese has a pitch accent; the following phrases have different accent patterns--

hási desu	'it's chopsticks'
hasí desu	'it's a bridge'
hasí désu	'it's an edge'

(from J.D. McCawley, *The Phonological Component of a Grammar of Japanese*, p. 135); in each case the accented syllables have high pitch and the others low pitch. Ancient Greek had a somewhat more elaborate pitch accent system, with both a primary accent (the so-called 'acute', characterized by high pitch) and a secondary (the so-called 'circumflex', characterized by a rise and then fall in pitch within one syllable), and with the unaccented ('grave') syllables bearing low pitch (Sturtevant, *The Pronunciation of Greek and Latin*, ch. 4).

In all of these languages, the arrangement is basically one primary accent per word. The question to be asked about any particular word is: *which syllable* has the primary accent? However, there are languages that use pitch and length in a very different, and quite un-English way: in them, the pitch of each syllable, or the length of each vowel or consonant, may be chosen (perhaps with a few restrictions) from a set of two or more possibilities. In these languages, the question is: *which pitch/length* does this syllable have? So, in Mandarin (Chinese), there are many sets of words that differ only in their pitch levels--a syllable pronounced much like American English *shir* means 'division' with a level high pitch, 'ten' with a pitch rising from mid to high, 'dung' with a pitch that dips briefly to low and then rises to high, or 'to be' with a pitch falling from high to low (these are customarily graphed as ˥ , ˧˥ , ˨˩˦ , ˥˩ , or labeled as 55, 35, 214, 51, with the numbers going from lowest pitch 1 to highest pitch 5: Chao, *A Grammar of Spoken Chinese*, sec. 1.3.4). Here, the choice of pitch level carries as much meaning as the choice of vowel in the English words *meat*, *mate*, *mutt*, and *moot*. Languages that use choice of pitch level to contrast different words are sometimes called *tone languages*. Languages that use choice of length in the same way might be called *quantity languages*. The term is not standard, but languages of this type are very numerous. In Korean, for instance, there are contrasts between [seda] 'to count' and [se:da] 'string', both with a first vowel roughly like that in English *late*, and between [sɛm] 'fountain' and [sɛ:m] 'jealousy', both with a vowel like that in English *let*--but in Korean the vowel in the second word of each pair is noticeably longer than the vowel in the first (Ladefoged, *A Course in Phonetics*, pp. 23-4). (Notice in the transcription that [e:] is not two sounds, some sound [e] followed by another sound [:]; it is simply a longer version of the sound transcribed [e].)

So far I've contrasted accent systems, in which the basic principle is the marking of a single syllable in a word as most prominent, with the use of pitch and length as properties of individual syllables or sounds. Virtually every known language has some sort of accent system, but only some are tone languages or quantity languages.

There are, alas, a rather large number of types of accent systems. English has a particularly complex system; in part, the placement of English stress seems to be utterly arbitrary and associated with particular words (so that *serif*, *tariff*, *rabbit*, *abbot*, *Perry*, *merit* have stress on the first syllable, while *giraffe*, *carafe*, *Marie*, *abut*, *kaput*, and *legit* have it on the last, though the vowels and consonants in the words are very similar), but to some extent it can be predicted. In many languages, the position of accent is not so *free* as it is in English, but instead is wholly predictable (or *fixed*), on the basis of syllable position and/or the vowels and consonants involved.

Exercises

3. Below are pairs of related English words, nouns in Column A and related adjectives with the ending *-ic* in column B.

(a) For each word, mark the syllable with primary stress with the numeral 1.

(b) Formulate a simple principle that governs where primary stress falls in the words of Column B.

A	B
cone	conic
scene	scenic
rune	runic
hygiene	hygienic
Islam	Islamic
icon	iconic

A	B
atom	atomic
nomad	nomadic
angel	angelic
volcano	volcanic
symphony	symphonic
aroma	aromatic
alcohol	alcoholic
period	periodic
acrobat	acrobatic
metronome	metronomic
electron	electronic
anemia	anemic
catastrophe	catastrophic
cataclysm	cataclysmic
aristocrat	aristocratic
hermaphrodite	hermaphroditic

4. Below are some Turkish words (in ordinary Turkish orthography), with English translations. The syllable with primary stress has been marked with a ´. Formulate a principle that says where Turkish stress is placed.

él	'a hand'
elím	'my hand'
deníz	'an ocean'
denizé	'to an ocean'
denizín	'of an ocean'
evcikdén	'from a little house'
dişimizín	'of our tooth'
dişlerimizín	'of our teeth'
evcikimizé	'to our little house'
evciklerimizé	'to our little houses'

5. Below are some Finnish words (in ordinary Finnish orthography), with English translations. The syllable with primary stress has been marked with a ´. Formulate a principle that says where Finnish stress is placed.

jós	'if, whether'
sýy	'cause, reason'
níin	'thus, so, yes'
nýt	'now'
héti	'at once'
sékä	'and'
súuri	'large'
láulan	'I sing'
láulaa	'(s)he sings'
láulamme	'we sing'

láulavat	'they sing'
hárrastan	'I'm interested in'
hárrastamme	'we're interested in'
rákennustaide	'architecture'
sánomalehti	'newspaper'
rákennustaiteen	'of architecture'
rákennustaidetta	'some architecture'

6. Below are some words in Yawelmani Yokuts (a native language of California), adapted from Kuroda's *Yawelmani Phonology*. The syllable with primary stress has been marked with a ´. Formulate a principle that says where stress is placed in this language.

kí	'this'
náˀ	'I'
ké:ni	'to this'
ˀámin	'they'
k’íley	'cloud'
ˀílkit	'is/was sung'
ˀilíkhin	'sing/sang'
p’axá:t’it	'is/was mourned'
k’ilé:yaw	'in a cloud'
ˀupláalliˀ	'wild dove'
ˀilikmíxhin	'sing/sang with'
p’axat’míxhin	'mourn(ed) with'
ˀuplalié:ni	'to a wild dove'

7. The English words below all have primary stress on the second syllable. Those in group A have secondary stress on the first syllable, while the first syllable of the words in group B is unstressed. What distinguishes the two groups?

A. Montana
cantankerous
anticipate
bandanna
shampoo
campaign
ambition
bombard
amphora
Rangoon
Bengali
Mankato
fastidious
asbestos
escort [verb]
tableau
Atlantic
raclette
cartoon
torment [verb]
Marconi
Margolis

B. canoe
banana
lament
chemise
guitar
atomic
capacity
cigar
calliope
Adorno
accordion
affair
bazaar
position
assert
machine
Moran
Columbus

8. There are a large number of exceptions to the main generalization distinguishing groups A and B in the preceding exercise. In all of them, a word you would expect to be in group A, with secondary stress on the first syllable, turns up in group B, with unstressed first syllable. There is, for example, some tendency for very familiar names to lose a secondary stress on the first syllable; people who live in Saskatchewan or Atlanta are more likely to place the names *Saskatchewan* and *Atlanta*, respectively, in group B than are those of us with less familiarity with these places. Some other exceptions are systematic, and can be used to refine the main generalization. Consider the words in group C below (with unstressed first syllable). Compare them both with group A and with a new group D (with secondary stress on the first syllable), and state an exception clause on the main generalization.

C. Capri
abrasive
acrylic
acrostic
agree
matriculate
Patricia
quadrille
acute
acquire
D. abstract [adjective]
poltroon
Mancuso

The accent patterns of words are in some ways most obvious in situations where rhythm is of the essence--in verse, whether set to music or not. The rhythmic patterning of verse (indeed, the rhythmic patterning of all speech) depends, however, not only on the accent patterns of individual words spoken in isolation, but also on patterns of prominence assigned to *groups* of words, ultimately to whole sentences. Some words, like the English *to* associated with 'infinitive' verb forms, are ordinarily subordinated to the following verb, as is a pronoun subject to its following verb:

(Ĭ wánt) (tŏ gó)

A combination of adjective and noun (*good tea*, *excellent jam*, *heavy weather*, *obnoxious buffoons*) also has greater prominence on the second word, the noun, but here the first word is not unaccented. Rather, the adjective has a secondary accent: *gòod téa*, *èxcellent jám*, and so on. Note that we are providing *two* accentual descriptions of a phrase like *heavy weather*--one for the accent pattern of each word in isolation, one for the combination. There are important differences between the two systems. In particular, there is much more room for variations on an accentual theme in phrase patterns than in word patterns. In *I see you*, any one of the three words can bear the primary accent, with a different meaning associated with each choice. But a word like *obnoxious* must always have the primary accent on the second syllable; most words have only one accent pattern, and the few examples of variation in pattern (like $\overset{2\ 0\ 1}{\textit{Tennessee}}$ vs. $\overset{1\ 0\ 2}{\textit{Tennessee}}$) are associated not with meaning differences, but with dialect or style differences.

Nevertheless, for the purposes of verse the *similarities* between the two levels of accentual organization must be exploited. The phrase-accent pattern of *Ĭ wánt* and *tŏ gó* must be identified with the word-accent pattern of $\overset{0\ 1}{\textit{below}}$, $\overset{0\ 1}{\textit{anoint}}$, $\overset{0\ 1}{\textit{command}}$, and $\overset{0\ 1}{\textit{ago}}$; phrases like *good tea* as well as words like $\overset{2\ \ 1}{\textit{monsoon}}$ must be treatable either as weak-strong (like *below* and $\overset{0\ 1}{\textit{I want}}$) or as strong-strong; and a long word like $\overset{2\ 0\ 0\ 1\ 00}{\textit{antediluvian}}$ must count as equivalent to such two-word phrases as *àccŭrăte ínstrŭmĕnt* or *àmŏrŏus dállĭănce*.

In fact, in a verse form the accentual patterns of phrases must be matched up with an abstract pattern characteristic of that form. The units (called *feet*) composing these abstract patterns themselves each consist of one strong syllable with associated weak syllables. The weak-strong foot of *to go* and *ago* is traditionally called an *iamb* (verses composed primarily of iambs are then *iambic*). Much English verse is evenly iambic; consider the beginning of the 'letter poem' from the last chapter of *Alice's Adventures in Wonderland*:

(3) Thĕy tóld mĕ yóu hăd béen tŏ hér,

Ănd méntiŏned mé tŏ hím

Here the accent pattern of this sentence has been matched to a completely regular iambic *meter*:

˘ ´ | ˘ ´ | ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ or, equivalently:

ws - ws - ws - ws
ws - ws - ws

(Notice that the two syllables of *mentioned* are split between two feet; meter is no respecter of word boundaries.)

The impression of great regularity in verse depends on more than the existence of a dominant foot type throughout. Verse is also divided into *lines*, normally all of the same length in feet. (Traditional verse in English also requires certain lines to *rhyme*. But rhyme is by no means a universal characteristic of poetic forms--neither ancient Greek nor ancient Latin verse employed it, for instance--while some sort of metrical organization is.) In English popular verse by far the dominant line length is four feet, technically *tetrameter*. (There are corresponding terms for lines of other lengths--*monometer* (one foot), *dimeter* (two), *trimeter* (three), *pentameter* (five), *hexameter* (six), *heptameter* (seven), *octameter* (eight).) Both lines of the first Banbury Cross rhyme, (1) above, have four feet; so do the first and third lines of the second Banbury Cross rhyme (2), and the first line of the *Alice* letter poem (3).

But what of the remaining lines of (2) and (3)? They seem to have only three feet. Appearances are sometimes deceiving, however. To see what is really going on, beat your fingers or clap your hands on the strong syllables of (2), reprinted below, as you read it. You should find that

(2) As Í was góing to Bánbúry

Upón a súmmer's dáy,

My dáme had bútter, éggs, and frúit,

And Í had córn and háy.

you don't rush immediately from the last word, *day*, in the second line to the first word, *my*, in the third, but rather that you pause briefly--and that in that pause a *beat falls*. The second line of (2) has the equivalent of a musical *rest* at its end (one might call it a *silent foot*, if the name weren't so contradictory). In fact, (2)--and also (3), though this is not obvious in a two-line extract--are just as much tetrameter as (1); in (2) and (3) the form is varied some by a regular alternation between lines with four full feet and those with three feet plus a rest. For (3), we can notate this pattern as

˘ ´ | ˘ ´ | ˘ ´ | ˘ ´

˘ ´ | ˘ ´ | ˘ ´ | R

Any verse as rigidly regular in meter as (3) would quickly become singsong and boring. Extended passages of unvarying iambs are very rare in English verse, in fact. Usually a predominantly iambic pattern is varied by the addition or elimination of weak syllables, or by the reversal of the pattern, especially at certain positions within the line. The Banbury Cross rhyme (2), for instance, is perfectly iambic in lines 2 through 4, but its first line has two alterations in the pattern:

˘ ´ | ˘ ´ | ˘ ˘ ´ | ´ ˘

The third foot has an extra weak syllable, and the fourth is reversed, strong-weak rather than weak-strong.

Exercise

9. Below is the first stanza of a nonsense poem, 'The Jumblies', by Edward Lear (*The Complete Nonsense of Edward Lear*, pp. 71-4).

(a) Notate the pattern of feet and rests, using ˘ to stand for a weak syllable, ´ for a strong, | for the boundary between feet, and R for a rest.

(b) Argue that this poem is iambic tetrameter.

(c) What is the most frequent type of deviation from the iambic pattern in this poem?

(d) Which feet are most likely to show this deviation?

They went to sea in a sieve, they did;
In a sieve they went to sea:
In spite of all their friends could say,
On a winter's morn, on a stormy day,
In a sieve they went to sea.
And when the sieve turned round and round,
And everyone cried, "You'll all be drowned!"
They called aloud, "Our sieve ain't big;
But we don't care a button, we don't care a fig:
In a sieve we'll go to sea!"
Far and few, far and few,
Are the lands where the Jumblies live;
Their heads are green and their hands are blue;
And they went to sea in a sieve.

The iamb is not the only type of foot in use in English verse. Three others occur with moderate frequency. First, there is the reversed iamb, or *trochee*, as in *weather*, in the *bury* of *Banbury* in (2), or in *know it*. The witches' incantation in Shakespeare's *Macbeth*--

(4) Double, double, toil and trouble,
Fire burn and cauldron bubble.

is almost perfectly trochaic (indeed, if *fire* is read with two syllables rather than one, as it almost always is, the lines *are* perfectly trochaic). Then there is an iamb with an extra weak syllable, an *anapest*, as in *in a sieve* or *inexact*; and finally a trochee with an extra weak syllable, a *dactyl*, as in *care for it* or *parable* or either half of *unsuitability*. To summarize:

	strong syllable last	strong syllable first
2-syllable feet	˘ ′ IAMB	′ ˘ TROCHEE
3-syllable feet	˘ ˘ ′ ANAPEST	′ ˘ ˘ DACTYL

(Note the stress patterns of these technical terms: *iamb*, *trochee* and *dactyl* are all 1 2, *anapest* is 1 0 2. If you've done exercise 3, you should know where the primary stress falls in *iambic*, *trochaic*, *dactylic*, and *anapestic*.)

It's useful to have a term for an abbreviated iamb or trochee, for a foot consisting entirely of one strong syllable. This is a *spondee*[2] (stress pattern 1 2 again; the related adjective is *spondaic*).

Exercises

10. Below are four limericks, a clean one by Edward Lear and then three less savory examples from George Legman's collection *The New Limerick* (#84, 926, and 1605).

(a) Notate the pattern of feet and rests, as before, for the Lear limerick.

(b) What is the dominant meter in these verses--iambic, trochaic, anapestic, or dactylic?

(c) What are the most frequent types of deviation from the pattern, and where do they occur?

(d) Limericks are customarily said to have five lines 'of which the first, second, and fifth, consisting of three feet, RIME; and the third and fourth lines, consisting of two feet, RIME.' (Thrall, Hibbard, and Holman, *A Handbook to Literature*, p. 258; *rime* is their eccentric spelling of *rhyme*)--that is, they are customarily viewed as a five-line form with the pattern

trimeter
trimeter
dimeter
dimeter
trimeter

Argue that limericks are in fact tetrameter, just like almost all English popular verse.

A There was an Old Man who supposed
That the street door was partially closed;
But some very large Rats
Ate his coats and his hats,
While that futile Old Gentleman dozed.

B The enjoyment of sex, although great,
Is in later years said to abate.
This well may be so,
But how would I know?--
I'm now only seventy-eight.

C The Grecians were famed for fine art,
And buildings and stonework so smart.
They distinguished with poise
The men from the boys,
And used crowbars to keep them apart.

D There was a young girl from Samoa
Who said to a sailor named Noah:
"You can kiss me and squeeze me,
But remember, to please me
I'm allergic to spermatozoa."

11. Below are four examples of a single verse form, all taken from Anthony Hecht and John Hollander's *Jiggery-Pokery* (pp. 81, 93, 106, and 112).

(a) Notate the pattern of feet and rests, as before, for 'No Foundation'.

(b) What is the dominant meter in this form?

(c) What is the most frequent type of deviation from this pattern, and where does it occur?

(d) The form is customarily printed as two stanzas consisting of four lines each. If so, how many feet do these lines have?

(e) Suggest some reasons why you might want to look at this form as tetrameter (again).

Historical Reflections

Higgledy-piggledy,
Benjamin Harrison,
Twenty-third President,
Was, and, as such,

Served between Clevelands, and
Save for this trivial
Idiosyncrasy,
Didn't do much.

* * *

Vice

Higgledy-piggledy
Thomas Stearns Eliot
Wrote dirty limericks
Under the rose,

Using synecdoches,
Paranomasias,
Zeugmas, and rhymes he de-
Plored in his prose.

* * *

No Foundation

Higgledy-piggledy
John Simon Guggenheim,
Honored wherever the
Muses collect,

Save in the studies (like
Mine) which have suffered his
Unjustifiable,
Shocking neglect.

* * *

High Art

Higgledy-piggledy
Anthony Hollander,
Two-bards-in-one, worked their
Brains to a storm,

Seeking out words for the
Antepenultimate
Line of this dismally
Difficult form.

12. Bob Dylan's music comes in a variety of forms, some of them quite complex. But most of his songs use either traditional American folk song forms or blues forms, often with considerable freedom in the number of unaccented syllables in a foot. Exhibit A below has three verses and the refrain of a Dylan folk song, 'Lay Down Your Weary Tune' (1964-5); Exhibit B has three verses and the refrain of a Dylan blues song, 'Tombstone Blues' (1965). (Quotations from *Bob Dylan*, a 1974 Warner Bros. collection of music and lyrics.)

(a) Notate the pattern of feet and rests, as before, for 'Lay Down Your Weary Tune'.

(b) What is the dominant meter in this lyric? The abstract scheme of feet and rests?

(c) What is the most frequent type of deviation from these patterns, and where does it occur?

(d) Read through 'Tombstone Blues' several times, out loud and fairly fast, to get the beat. What is the abstract scheme of feet and rests in the verses? In the refrain?

(e) What is the dominant meter?

A Struck by the sounds before the sun,
I knew the night had gone,
The morning breeze like a bugle blew
Against the drums of dawn.

The ocean wild like an organ played
The seaweed's wove its strands,
The crashin' waves like cymbals clashed
Against the rocks and sands.

I stood unwound beneath the skies
And clouds unbound by laws,
The cryin' rain like a trumpet sang
And asked for no applause.

[Refrain]
Lay down your weary tune, lay down,
Lay down the song you strum
And rest yourself 'neath the strength of strings,
No voice can hope to hum.

B 1. The sweet pretty things are in bed now of course
The city fathers they're trying to endorse
The reincarnation of Paul Revere's horse
But the town has no need to be nervous.

The ghost of Belle Starr she hands down her wits
To Jezebel and nun she violently knits
A bald wig for Jack the Ripper who sits
At the head of the chamber of commerce.

4. The King of the Philistines has soldiers to save
Put jawbones on their tombstones and flatters their graves
Puts the pied piper in prison and fattens the slaves
Then sends them out to the jungle.

Gypsy Davey with a blow torch he burns out their camps
With his faithful slave Pedro behind him he tramps
With a fantastic collection of stamps
To win friends and influence his uncle.

6. Where Ma Raney and Beethoven once unwrapped their bed roll
Tuba players now rehearse around the flagpole
And the National Bank at a profit sells road maps for the soul
To the old folks home and the college.

Now I wish I could write you a melody so plain
That could hold you dear lady from going insane
That could ease you and cool you and cease the pain
Of your useless and pointless knowledge.

[Refrain]
Mama's in the fact'ry
She ain't got no shoes
Daddy's in the alley
He's lookin' for food
I'm in the streets
With the Tombstone Blues.

Appendix: Sample Answers

1. kaleidoscope: 0 1 0 2
canoe: 0 1
commentator: 1 0 2 0
accent: 1 2 (1 0 in British English)
parrot: 1 0
pervert [noun]: 1 2
pervert [verb]: 0 1
Tennessee: 2 0 1 (1 0 2 for some American speakers)
maniac: 1 0 2
canopy: 1 0 0
bandanna: 2 1 0
despotic: 0 1 0 or 2 1 0
telegraph: 1 0 2
telegraphy: 0 1 0 2
telegraphic: 2 0 1 0

2. No English word can begin with two or more unaccented syllables.

```
         |                      |
3.  a.  cone                   conic
          |                      |
        scene                  scenic
         |                      |
        rune                   runic
         |                          |
        hygiene                hygienic
        |                         |
        Islam                  Islamic
                 |
           or Islam
        |                        |
        icon                   iconic
        |                        |
        atom                   atomic
         |                         |
        nomad                  nomadic
        |                         |
        angel                  angelic
         |                         |
        metal                  metallic
            |                       |
        volcano                volcanic
         |                          |
        symphony               symphonic
          |                         |
        aroma                  aromatic
        |                           |
        alcohol                alcoholic
         |                          |
        period                 periodic
        |                           |
        acrobat                acrobatic
         |                           |
        metronome              metronomic
          |                          |
        electron               electronic
          |                      |
        anemia                 anemic
           |                          |
        catastrophe            catastrophic
         |                           |
        cataclysm              cataclysmic
          |                             |
        aristocrat             aristocratic
            |                             |
        hermaphrodite          hermaphroditic
```

4. The last syllable of a word is stressed.

5. The first syllable of a word is stressed.

6. The next-to-last syllable of a word (or the only syllable, if the word is a monosyllable) is stressed.

7. Words in group A have two consonants between their first and second vowels, while those in group B have only one. [Note that this generalization must be made in terms of sounds rather than letters: *calliope*, *accordion*, *affair*, *assert*, and *machine* in group B are spelled with two consonant letters in the relevant place, but are pronounced with only one consonant sound there.]

8. The consonants *r y w* (the full set of approximants in English) do not count at the end of a sequence of consonants. [Note that *r* does count at the beginning of such a sequence: *cartoon*, *torment*, *Marconi*, and *Margolis* are in group A. The effect of the exception clause is to require two (or more) consonants preceding an *r*, *y*, or *w* for a word to fall into group D.]

9. (a)

```
˘ ´    |   ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ˘ ´  |   ˘ ´ |   ˘ ´ | R
˘ ´    |   ˘ ´ |   ˘ ´ | ˘ ´
˘ ˘ ´  |   ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ˘ ´  |   ˘ ´ |   ˘ ´ | R
˘ ´    |   ˘ ´ |   ˘ ´ | ˘ ´
˘ ´    | ˘ ˘ ´ |   ˘ ´ | ˘ ´
˘ ´    |   ˘ ´ |   ˘ ´ | ˘ ´
˘ ˘ ´  | ˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´
˘ ˘ ´  |   ˘ ´ |   ˘ ´ | R
  ´    |   ˘ ´ |   ´   | ˘ ´
˘ ˘ ´  | ˘ ˘ ´ |   ˘ ´ | R
  ˘ ´  |   ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ˘ ´  |   ˘ ´ | ˘ ˘ ´ | R
```

(b) The meter is clearly one with the strong syllable last: thirteen of the fourteen lines (all except line 11) begin with a weak syllable, and all fourteen end with a strong. So the meter is either iambic or anapestic. The shortest line, 11, has only six syllables but four clear strong ones (*far* and *few*, each twice), and ten of the fourteen lines can be read easily with four strong syllables. So the verse is tetrameter.

Three of the lines (3, 6, and 8) are perfectly iambic (tetrameter), only one (9) perfectly anapestic (also tetrameter). Indeed, of the 51 feet, 33 are iambic, 16 anapestic, and 1 spondaic. This is a clear, two to one in fact, preponderance of iambic feet.

(c) Extra weak syllables at the beginnings of feet--that is, anapests rather than iambs.

(d) The odd--first and third--feet, but especially the first. There are 7 anapests in first feet, 3 in second, 5 in third, 1 in fourth.

10. (a)
˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R
˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R
˘ ˘ ´ | ˘ ˘ ´
˘ ˘ ´ | ˘ ˘ ´
˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R

(b) Anapestic.

(c) Missing weak syllables at the beginnings of feet--that is, iambs rather than anapests. They occur in the first foot of a line. There are nine iambic feet in the four limericks, and they are all at the beginnings of lines: line 1 of A; lines 3, 4, and 5 of B; lines 1, 2, and 4 of C; and lines 1 and 2 of D.

(d) Lines 1, 2, and 5 of all four limericks are tetrameter as they stand: there is a rest in place of the fourth foot in each case. That leaves lines 3 and 4. But these are only two feet long; putting them together makes a single four-foot, i.e. tetrameter, line. The limerick form is then four lines of tetrameter, written as five:

˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R
˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R
˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´
˘ ˘ ´ | ˘ ˘ ´ | ˘ ˘ ´ | R

11. (a)

´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´
´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´

(b) Dactylic.

(c) A spondaic rather than dactylic foot. At the end of the fourth and eighth lines. Indeed, the fourth and eighth lines of all four poems end in spondees. The lines are otherwise perfectly dactylic.

(d) Two.

(e) 'Vice' has a word (*deplored*) divided between two successive lines, a practice known to modern 'free verse' but essentially never seen in tightly constructed--metrically regular and rhyming--poems like these. The other three poems all have another type of peculiar line division. They have lines ending in 'little words' that are normally pronounced in a phrase with *following* words: *and* (line 5 in 'Historical Reflections'), *the* (line 3 in 'No Foundation' and line 5 in 'High Art'), *like* (line 5 in 'No Foundation'), unstressed *his* (line 6 in 'No Foundation'), unstressed *their* (line 3 in 'High Art'). These line divisions all feel uncomfortable and peculiar. Note that all except one of the offenses in line division occur at the ends of odd lines, in particular lines 3, 5, and 7. In other words, lines 3, 5, and 7 often behave as if they formed a unit with the immediately following lines. This proposal is strengthened somewhat by the rhyme pattern, which in the written versions of the poems seems to call for rhyme between the two spondees, at the ends of lines 4 and 8. Rhymes at this distance, four lines apart, are not unknown, but are rather odd. If, however, each pair of written lines is treated as a single verse line, then the required rhyme will be between lines 2 and 4 (rather than 4 and 8), a very common every-other-line pattern (compare the refrain, lines 11-14, of 'The Jumblies' in the previous exercise). The pattern for this form is then

´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘ | ´
´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘
´ ˘ ˘ | ´ ˘ ˘ | ´ ˘ ˘ | ´

12. (a) ´ | ˘ ˘ ´ | ˘ ´ | ˘ ´

(or, with stress shifted to *by*: ˘ ´ | ˘ ´ | ˘ ´ | ˘ ´)

˘ ´ | ˘ ´ | ˘ ´ | R
˘ ´ | ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R

˘ ´ | ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R
˘ ´ | ˘ ´ | ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R

˘ ´ | ˘ ´ | ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R
˘ ´ | ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R

˘ ´ | ˘ ´ | ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R
˘ ´ | ˘ ´ | ˘ ˘ ´ | ˘ ´
˘ ´ | ˘ ´ | ˘ ´ | R

(b) Iambic. Each verse has four tetrameter lines, with foot 4 of the even (rhyming) lines replaced by a rest.

(c) An anapest replaces the iamb in the third foot of a line, especially line 3 (this happens three times in line 3, once in line 1).

(d) Verse: two sets of four lines of anapestic tetrameter, with the last foot of line 4 replaced by a rest (lines 1, 2 and 3 rhyme). Refrain: three lines (written as six) of anapestic tetrameter, with the first foot of each line shortened and reversed, that is, realized as a trochee or spondee (lines 1 and 3 rhyme again, and line 2 half-rhymes with them).

NOTES

*This paper was completed while I was at the Center for Advanced Study in the Behavioral Sciences. I am indebted to the Spencer Foundation for financial support and to the Ohio State University for a sabbatical year.

[1] A system of *quantitative accent*, in which only duration marks prominence, is logically possible, but I know of no unproblematic examples.

[2] In classical Greek metrics, a spondee is a foot consisting of *two accented* syllables, but since English verse allots one strong syllable to each foot, the term can be used for a foot of one strong syllable without any confusion.

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THE WORKSHOP METHOD:
DESIGNING AND IMPLEMENTING UNDERGRADUATE LINGUISTICS COURSES

K. P. Mohanan

1. Introduction

Every teacher who takes his profession seriously asks himself how he can give a better course the next time[1]. Quite often, when reviewing what he has taught or is going to teach, he also asks himself why he is teaching what he is teaching the way he is teaching it. What follows is an attempt to share with fellow teachers of linguistics some of the answers which have emerged out of my experiments with teaching linguistics, and thinking about teaching in general. I propose what may be called the *workshop method* of teaching linguistics as an alternative to the traditional *lecture method* of teaching: the latter hands down a body of readymade knowledge to the students and teaches them *about* linguistics, making the students passive recipients of the knowledge, while the former makes the students construct the body of knowledge that the teacher wants them to learn, developing the investigative skills required for doing linguistics, in the course of acquiring this knowledge.[2] The frame of reference for the discussion in this article would be the domain of what has been called formal linguistics (phonetics, phonology, morphology, syntax, semantics), since this is the only area that I have some teaching experience in. It is my hope, however, that teachers dealing with other domains (e.g. psycholinguistics, sociolinguistics) would be able to translate the spirit of what I am saying into their frames of reference, and evaluate the proposals I make against their experience.

In order to teach a course effectively, one must begin with a clear idea of the objectives of the course, which involves spelling out the desired target, namely, what the student should know or be able to do at the end of the course. The next step is to seek the best means to achieve these objectives. In this article, therefore, I shall seek answers to the following questions:

1. a. How do we formulate the *objectives* of an undergraduate course in linguistics?
   b. How do we *design* and *implement* the course that achieves these objectives?

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[1] Parts of the material in this article were presented at talks given at the National University of Singapore, at the Central Institute of English and Foreign Languages, India, and at the Princeton Conference on Undergraduate Linguistics Education in 1987. I have benefited a great deal from the discussions that followed the talks. I have also benefited from the comments from Paul Kiparsky, Charles Ferguson, Tom Wasow, John Rickford, Makhan Lal Tickoo, Kathryn Henniss, Cheri Garcia, John Stonham, P.U. K. Warrier, and Tara Mohanan on previous drafts of this article.

[2] I was first exposed to the idea of the workshop method of teaching in a course on Linguistics and Education offered by Ken Hale and Wayne O'Neil in 1978 at MIT. I discovered how challenging and exciting teaching linguistics could become when I took this excellent course, and have since then been thinking about ways of developing and implementing the workshop idea, and conducting experiments in the courses I have been teaching. This article, therefore, may be seen as what grew out of the seed planted by the Hale-O'Neil course.

For an individual course to be meaningful, it must be taught as part of the program as a whole, in harmony with the rest of the courses in the program, striving towards a common goal. Hence, answering question (1a) presupposes a clear idea of the goals of the undergraduate linguistics program in general, which in its turn is dependent on our conception of what undergraduate education should be aiming at. Thus, we must begin with the most fundamental question that faces all teachers, namely, what is education?

By way of approaching the issues involved in(1a) and (1b) from the right perspective, therefore, I will begin by placing undergraduate education against the background of education in general, and then placing the undergraduate linguistics program against the background of undergraduate education, seeking answers to the following questions:

2. a.What are the goals of education (from elementary school to the university)?
   b. What are the goals of undergraduate education? How do these goals fulfill those in (2a)?
   c. What are the goals of an undergraduate linguistics program? How do these goals fulfill those in (2b)?

In what follows, I shall prepare the ground for answering questions (1a,b) by answering (2a-c) first. Though I will argue for definite positions at every stage, my main purpose is to point out the kinds of choices that teachers of linguistics have to make, and to lay out a framework within which intelligent discussion of linguistics curricula and classroom implementation becomes possible.

2. A Perspective on Linguistics and Education

2.1. Education as a Fitness Program

I would like to think of education as a *training program* that fulfills an individual function and a social function. It seeks to develop an individual's potentials to its fullest, and prepares her for a richer and more meaningful inner and outer life, and, at the same time, it prepares the individual for fulfilling his social or professional roles in the most effective fashion. A fruitful way of conceptualizing the nature of education spanning from kindergarten to the undergraduate degree is as a *fitness program* in that it aims to increase the fitness of a growing individual in various domains of life, including physical, intellectual, professional, emotional, social, cultural, aesthetic, moral, and spiritual fitness. While all these different kinds of fitness must be developed simultaneously, it would be reasonable to assume that intellectual fitness and professional fitness receive greater emphasis at the undergraduate level, while emotional fitness, moral fitness, etc. are emphasized during the early phase of education, at the kindergarten and elementary school. Intellectual fitness covers such faculties as reasoning, memory, intellectual perception and open mindedness. Professional fitness refers to the ability to function competently in one's profession, whether it be as a lawyer, teacher, or business executive. Emotional fitness includes, say, the ability to be relaxed, the ability to wash away corrosive feelings such as anger, hatred and jealousy, the ability to be emotionally sensitive, and so on. Social fitness refers to the ability to live in harmony with fellow human beings. Cultural fitness refers to the acquisition of the appropriate cultural value, these values being somewhat different from culture to culture. Aesthetic fitness includes the ability to enjoy music, poetry, painting etc. and the ability to find happiness in the beauty of a passing cloud. Moral fitness covers qualities such as truthfulness, courage, integrity, etc. , and spiritual fitness refers to the individual's ability to transcend the self, that is, to strive towards a goal that lies outside the ego, and seek the inner spiritual strength to rise above the ego.

Needless to say, there are very few actual schooling programs that are successful in implementing these goals. In practice, most formal schooling (primary to undergraduate) tends to concentrate on "academic" education which would contribute to *one* of the components of what I have called intellectual fitness, and ignore facets of individual growth which are of a nonacademic nature, including significant aspects of intellectual growth itself.

As remarked earlier, intellectual and professional fitness constitutes the main goals of university education. What should go into professional fitness is for the members of each profession to decide, and therefore I will not go into this issue here, excpet for professional fitness in linguistics. I think of intellectual fitness as involving (at least) the following components:

3. a. The *knowledge* necessary to perform certain intellectual tasks.
   b. The ability to *retain* or store knowledge.
   c. The ability to *recall* or retrieve the stored knowledge when the occasion demands it.
   d. The ability to *apply* the knowledge to the appropriate situation.
   e. The ability to *acquire* further knowledge from other individuals.
   f. The ability to *create* or *discover* new knowledge.

(3a) refers to the *information* that every educated person ought to possess. For example, we would expect an educated person to know that not all bacteria are harmful to the human body, and why he is voting for a particular candidate, even though we would not expect every educated person to know what the last line of T. S. Eliot's *The Wasteland* refers to, or how bees locate honey. (3b) and (3c) constitute the components of an efficient *memory*. An example of (3d) would be solving the problem of a tight metal cap by heating it, applying the knowledge that things expand when heated.

(3e) and (3f) characterize the *ability to learn*, which presupposes both a *mental set* and a set of *skills*. The mental set that makes a person capable of learning would include (a) the desire to learn and the enjoyment of learning, (b) the ability to work hard in order to learn, and (c) openness of mind to new knowledge. The skills of learning include the not mutually exclusive skills of (a) observation, (b) drawing conclusions, (c) perceiving relationships which are not obvious, (d) evaluating ideas or proposals, (e) reasoning, and checking the reasoning, etc.

Most orthodox undergraduate schooling systems concentrate on a degenerate version of (3a), namely, the *information content associated with the discipline*. The attempt in such a system is to cram the student's mind with the maximum amount of information in three or four years, and to evaluate the student at the end of the program in terms of the amount of information that he has been able to store. Courses that concentrate on (3a) are typically those that rely on extensive reading lists, or thorough faithful adherence to textbooks. In order to do well in the orthodox system, it is indeed necessary for the student to develop some of the skills of acquiring knowledge ((3.e.)), retaining the knowledge till the examimations (3.b.) and recalling it in the examinations ((3.c.)). However, (3.b) and (3.c) do not constitute the goals of the orthodox systems, but are the accidental side products (not properly developed), of the demand on goal (3.a). A few enlightened systems venture to incorporate the application of knowledge ((3.d)) in the teaching, but very few programs pay serious attention to (3.e.) and (3.f). The way I see it, the main focus of the training in intellectual fitness should be on the skills of acquiring, discovering, and creating knowledge, and goals (3a-d) would naturally follow while pursuing (3e,f). Given that learning should not stop after the university degree, the best program would be one that teaches a student *how to learn* rather than one that hands down readymade knowledge.

What I am trying to contrast are two conceptions of the output of education, namely, that of a *scholar* versus that of a *researcher*. A system that emphasises (3a) produces a scholar, while one that emphasises (3e,f) produces a researcher. In practice, a good researcher is also a scholar, and good scholar is also a researcher, but it would be helpful to separate the two aspects in order to evaluate teaching systems with different emphases. In syntax, for example, a scholar who is not a researcher is one who can *explain* in detail the binding theory in GB, the formalism of f-structure and f-descriptions in LFG, the metarules in GPSG, the exact difference between relational grammar and arc pair grammar, what Postal said on page 243 of his book on raising, why Chomsky found it necessary to revise the On Binding framework, how Panini handled grammatical functions, how Zellig Harris formulated the notion of transformations, and so on, but cannot produce any work on his own, or come up with the fragment of a grammar for any language. This is an example of *sterile scholarship*. As stated above, it is impossible to be a researcher without the bare minimum of knowledge to support it, but an example of an *ignorant researcher* is one who has made contributions to the autosegmental theory but hasn't heard of Firth or prosodic phonology. Both the sterile scholar and the ignorant researcher are undesirable outcomes of an unbalanced educational system.

The conception of education as a fitness program, when applied to university education, leads to the conception of the university as a *training center*, rather than as a *disseminator of knowledge*. One can acquire the information content of "knowledge" associated with a discipline (the "knowledge that ...") by spending some time in the library if there is a good reading list, but the skills associated with a discipline (the "knowledge of how to...", including the modes of thinking associated with a discipline) are difficult to come by without help from individual supervision. If we accept this conception of education as a fitness program and the university as a training center, then a university teacher should be seen not as a *lecturer* who offers learned discourses on various topics, but as a *trainer* who offers guidance in performing certain intellectual tasks.

2.2. Professional and Educational Goals

A student who takes a *graduate* course in linguistics requires the information content and skills associated with the discipline for professional reasons: she wants to become a professional linguist, or wants to take up a language-related profession such as language pathology, language teaching, or artificial intelligence. This is not always true of a student who takes an *undergraduate* course in linguistics, since it is quite possible that the undergraduate degree will be the terminal point for the student, and that her future profession will have nothing to do with language at all. For an undergraduate program to be meaningful, therefore, its design must take into account these two types of students, and aim at both the *professional* and *educational* goals of a program. By professional goals I mean the combination and knowledge and skills necessary to function effectively as the member of a particular (set of) profession(s), and by educational goals I mean the combination of knowledge and skills necessary to function effectively as an educated individual in the human society. The fundamental issue that must be addressed when designing and implementing a course at the undergraduate level, therefore, is the simultaneous fulfillment of professional and educational goals.

Consider for a moment a student who takes a few undergraduate courses in linguistics, but ends up as a business executive. Assuming that all education is preparation for future life, and that we would not like the business executive to look back on his university education and consider it a waste of time and energy, we need to have a clear picture of the (nonprofessional) educational benefits that an individual can derive by going through a linguistics course or program. It is fairly clear that our business executive will not find useful in her life the ability to construct phonemic analyses or construct phrase structure rules. Nor will she find any occasion to draw upon her knowledge of c-command or the obligatory contour principle. We should look for the educational benefits of undergraduate linguistics courses not in the specific *content* of linguistics, but rather in the *intellectual fitness* that she acquires in the course of studying linguistics. The educational value of an undergraduate course in phonology is not that the student would end up learning phonology, but that the process of learning phonology would improve the intellectual equipment of the student. This would not be unlike identifying the value of jogging as improving physical fitness, rather than in taking someone from one place to another.

In sum, we view education as a fitness program that seeks to develop various facets of an individual that leads to a richer inner and outer life, both from the individual and the social points of view. Of these, university education focusses on intellectual fitness and professional fitness. The undergraduate education caters to both needs, and graudate education concentrates on professional goals. Thus, the challenge posed by the designing of an undergraduate program is that it should cater to the needs of those who want to continue with formal schooling (by joining a graduate program), without making the program irrelevant for those who are not going to continue.

2.3. The Goals of an Undergraduate Program in Linguistics

Given the conception of the overall educational goals and the specific professional goals an ideal undergraduate program, the goals of an undergraduate linguistics program may be identified as as follows:

4. Professional Goals
    a. training for those who want to pursue graduate studies in linguistics.
    b. training for those who want to pursue graduate studies in other language related areas such as languge teaching, language patholody, AI etc.
    c. providing an "introduction" to the discipline such that
        (i) promising students would be attracted towards linguistics, and
        (ii) students can make up their minds whether they want to go into graduate programs in linguistics or not.

5. Educational Goals
    a. training in the scientific approach to knowledge, which includes:
        openness to new knowledge, nondogmatic approach to knowledge,
        realization of the non-infallibility of human knowledge, etc.
    b. training in the skills of scientific understanding, which includes:
        ability to observe, to draw conclusions based on evidence,
        to perceive relationships which are not obvious, to evaluate ideas
        or proposals, to verify the validity of the reasoning an argument, etc.

Any course that covers a domain of scientific investigation should provide some of the skills in (5) to the student, and linguistics should be no exception. We should also maximally exploit those skills the teaching of which each discipline naturally lends itself to. In what follows, I shall briefly sketch what must go into a program that seeks to fulfill goal (4a), and then go on to show how such a program can be made to satisfy goals (4b-c) and (5) as well.

2.4. Professional Goals

I stated earlier that the educational value of linguistics at the undergraduate level should be sought, not in the specifics of linguistics per se, but in the skills and attitudes that students learn in the course of learning these specifics, and the degree of success in transferring these skills and attitudes to other domains of knowledge. This way of resolving the apparent conflict between professional and educational goals has profound consequences for the designing and implementation of undergraduate courses. To begin with, given that what is transferrable to other domains of intellectual activity are the *skills* of linguistic investigation, not the *information content* associated with the discipline, it follows that our focus should be on the investigative skills needed to do linguistics, the information content being restricted to the bare minimum of conceptual structures required to support the practice of investigation. In order to be a professional linguist, one requires the ability to construct and evaluate (a) grammars within a set of theoretical assumptions, and (b) theoretical assumptions within a set of assumptions associated with a given paradigm. At these levels of functioning, a linguist requires the following types of skills[3] .

6. Levels of skills
   a. grammar construction and evaluation
   b. theory construction and evaluation
   c. paradigm extension and modification

7. Types of skills
   a. *Observation*: ability to look for and collect facts which are
      (i) "interesting" (i.e. have the potential to lead to a theoretical contribution), or
      (ii) relevant for a theory or proposal, at levels (6a) or (6b).
   b. *Insight*: ability to make connections, identify implications and predictions, perceive hidden patterns, etc.
   c. *Creativity*: ability to construct solutions, and arguments at levels (6a, b)
   d. *Criticism*: ability to evaluate analyses and arguments, including one's own.

By grammar construction, I refer to the ability to devise and evaluate an analysis for a body of facts (which involves (7a-d) at level (6a)), and to continue improving upon it by examining further facts and seeking better alternatives. A grammar is constructed in terms of a given theory, the data for which are grammars of natural languages. Training in theory construction involves the ability to identify the crucial assumptions behind various linguistic theories, evaluate these assumptions, and propose modificaions or innovations supported by well constructed grammars. Both grammar construction and theory construction are performed within a given paradigm that defines the intellectual climate of investigation by making assumptions about what constitutes the object of inquiry, what constitutes relevant data, what constitutes an explanation for the data, what constitutes a good argument, and so on.

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[3] As stated earlier, since my experience in teaching is limited to formal linguistics, I will base my discussion on this domain of linguistic investigation, hoping that the specialists in other fields will be able to reinterpret the spirit of what I am saying in terms of their areas. The skills listed in in (7) and (8) are the ones I have found relevant for phonology, morphology, and syntax

The abilities to construct and evaluate theories, and to extend, modify and evaluate paradigms, presuppose the ability to construct and evaluate grammars. Therefore, in an introductory course, one must begin with (6a). I suspect that (6b) belongs to the graduate program rather than an undergraduate program, and that (6c) cannot be directly taught . In what follows, therefore, I will restrict myself to objective (6a), and the different types of skills required for grammar construction ((7a-d)).

It must be pointed out that teaching grammar construction ((6a)) does not mean that it does not involve any theory at all, as grammars cannot be constructed without theories. Nor is it the case that while teaching grammar construction, the teacher employs theoretical assumptions without them to the students' attention: hidden assumptions in the practrice of grammar construction can be fatal to the growth of a student. All that the identification of (6a) as a separate level means is that the *relative emphasis* would be on the options within a given theoretical framework. The nature of the theoretical apparatus used in the construction of grammars along with the motivation for the assumptions within the theory is spelt out by the teacher wherever possible, but this aspect of the course would be relegated to the background, more or less the way morphology would be taught in a course on phonology.

3. A Course in Grammar Construction

3.1. The Lecture Method

Emphasis on the *skills* of grammar construction (as opposed to the *information* about the grammar of a language or grammars of different languages) has radical consequences for the methodology of teaching linguistics. The traditional mode of teaching undergraduate courses is the *lecture* method, the basic features of which are:

8. a. in the classroom: the teacher delivers a lecture, answering occasional
   questions from the students
   b. outside the class room: problem solving assignments or reading assignments
   to supplement the classroom activity.

When lecturing on the grammar of a language, teachers employ two alternative strategies in relating the data and the analysis of the data, which I shall refer to as the *analysis-as-fact* and the *analysis-as-assumption*. In the analysis-as-fact mode, the teacher first presents the principles as *facts*, and then presents the data as *examples illustrating the principle*. Thus, I have observed the following strategy in many undergraduate classrooms and textbooks:

9. Sample 1

Teacher: In English, the phoneme /p/ is realized as [ph] at the beginning of a stressed syllable, and as [p] elsewhere. For example, *pit* and *repeat* are pronounced with [ph], while *spit* and *rapid* are pronounced with [p].

10. Sample 2

Teacher: In English, an NP consists of Det and N, with Det preceding N. For example, in *The boy cried, the boy* is an NP, in which *the* is a Det, and *boy* is an N.

It is fairly obvious that these two samples illustrate the worst method of teaching any scientific discipline, namely, the dogmatic approach which is inconsistent with the very basis of science. As a result, hypothetical constructs like phoneme, NP, and VP are acquired by the students as facts, destroying all the possibility of further modification. If a student learns that we can use the ***assumption*** that /m, n, ŋ/ are distinct phonemes in English ***in order to account for certain facts***, he would be perfectly willing to abandon this assumption at a later point, and assume that the velar nasal is not a phoneme in English if that assumption yields better grammars. On the other hand, a student who is introduced to the /m, n, ŋ/ analysis as a fact is bewildered when he comes across the /m, n/ analysis. The bewilderment is akin to when faced with the propositions that (a) Delhi is the capital of India and (b) Delhi is the capital of Holland. If these two statements come from two different teachers, the student is forced to conclude that one of the the teachers must necessarily be either ignorant or perverse!

Though the analysis-as-fact approach is antethetical to the very spirit of scientific investigation, this appears to be the most popular mode of teaching undergraduate students in many scientific disciplines. I was taught physics in this manner when I was an undergraduate student, and constructs such as force, field, wave and particle, and various assumptions about these hypothetical entities were taught to me as facts. As a result, studying physics became as boring and hateful an activity as memorising the entries in an encyclopaedia.

In contrast to the analysis-as-fact approach, the analysis-as-assumption approach presents the constructs and principles used in linguistics as part of the set of assumptions that linguists have created in order to account for linguistic phenomena, and thereby provides the right understanding of the nature of scientific enquiry. In this approach, samples 3 and 4 would replace samples 1 and 2:

11. Sample 3

Teacher: Distributional data like [spit], [phit], [riphíit], [rǽpid] *[sphit], *[pit], *[ripíit], *[rǽphid] and alternation data like *rapid* [rǽpid]/*rapidity* [rəphíditi] can be accounted for if we assume that /p/, not */ph/ is a phoneme in English, and /p/ becomes [ph] at the beginning of a stressed syllable.

12. Sample 4

Teacher: Consider the following data: *The boy cries, I saw a boy, She gave the boy a book*, **Boy the cries*, **I say boy a*, **She gave the boy book a*. We can account for facts of this kind by assuming that (i) *a* and *the* belong to the category called det, and *boy* and *book* belong to the category called N, and, (ii) det precedes N in an NP ...

The advantages of this approach are immediately obvious. If what is presented to the class are assumptions, one can raise the questions *why these assumptions should be made* (motivation) and *why these, not an alternative set of assumptions, should be made* (comparison of alternatives). These two activities constitute the basis of all linguistic argumentation. For example, one can raise the question why we need the level of phonemic representation (in addition to the level of phonetic representation and distributional constraints stated on phonetic segments), and why we need to assume that certain segments are not present in the phonemic inventory (/p/, not */ph/). Couldn't we have accounted for the data in terms of distributional constraints stated on phonetic segments, without ever using the notion phoneme or phonemic representation? Again, why do we need to assume /p/ and derive [ph] from /p/ through a rule of aspiration, rather than assume /ph/ and derive [p] from /ph/ through a rule of deaspiration? Questions of this kind indicate the beginning of the *scientific* study of language that we call linguistics. These questions are the automatic consequences of the analysis-as-assumption approach, but are not meaningful in the analysis-as-fact approach.

To my mind, the best example of analysis-as-assumption approach in an introductory book is Einstein & Infeld's *Evolution of Modern Physics*. This book compares a scientist to a man looking at a clock (the internal mechanisms of which is hidden from him) and trying to guess the nature of the mechanisms on the basis of what he can observe, using the hypothetico-deductico method. Unfortunately, books of this kind hardly ever figure in conventional physics curricula.

Though the analaysis-as-assumption lecturing mode is infinitely superior to the analysis-as-fact lecturing mode, the lecturing mode itself is unsuitable in a training program that aims to develop the *skills* of investigation. A lecture can be used for *exposition*, in which difficult concepts are explained to the students (e.g. as in the exposition of the notion alienation in existential philosphy), or *demonstration*, in which the lecturer demonstrates how something is done (e.g. the demonstration of Chinese brush painting techniques), but is inadequate for the inculcation of active skills. A lecture demonstration in Chinese brushwork is indeed useful for one who wants to learn the techniques of painting, but if a series of demonstrations are all that one gets from a teacher, one is not going to acquire the skills of painting. For this, it is necessary for the student to pick up the brush and paint, with constant supervision from the teacher. For every hour spent on demonstration, there should be at least ten hours spent on the student painting and the teacher offering guidance.

The situation is no different in the teaching of the skills of grammar construction. A student learns how to swim or how to paint by doing it *in the class*, with guidance from the teacher, not simply by watching people swim or paint, listening to learned discourses on swimming or painting, or by reading scholarly works on swimming or painting. Similarly, a student learns to construct grammars by constructing grammars in the class with guidance from the teacher, not by watching the teacher construct the grammar, listening to learned discourses on grammar, or reading the books and articles in the library.

3.2. The Workshop Method

As an effective way of teaching the skills of grammar construction, I would like to recommend the use of what I call the *workshop method* of teaching linguistics, the essential idea of which is that the classroom is used as a workshop in which the students collectively build a grammar for a language with some guidance from the teacher.[4] The educational philosophy that underlies the workshop method may be stated as follows:

- Students learn better through active participation than through passive listening or reading.
- The business of a teacher is to teach the students how to acquire knowledge, not to hand down pre-packaged knowledge.
- Students acquire the skills of doing linguistics through *simulated research* in the classroom. Designing and implementing an introductory course therefore involves the design and implementation of carefully planned *tasks* the performance of which will lead to the desired information content and skills.

The most important features of the workshop method are: (a) it brings problem solving tasks into the classroom as a (partial) substitute for traditional lecturing, rather than relegating them to assignments which are supplements to lectures and reading, (b) it maximizes learning through discovery and creation on the part of the student, (c) it focuses on a large body of interacting data from a single language, rather than practising cross-word-puzzle type solutions on isolated bits of data from different languages, and (d) it attempts to build knowledge as a collective project of the class, rather than as an individual enterprise.

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[4] A department of linguistics that consistently and successfully employs the workshop method is that of University of California at Santa Cruz.

In short, the basic idea of the workshop method of teaching, as opposed to the lecture method, is that the classroom can be used as a workshop to *simulate research* in the classroom. Within this approach to teaching, the students become apprentices who create knowledge (as opposed to passive receivers of knowledge), and the teacher becomes a master craftsman who trains the apprentices (as opposed to the scholar who hands out ready made knowledge). The workshop method brings into the classroom the kinds of activities which are usually associated with assignments outside the classroom, and builds an entire course centered round the *tasks* that students perform in the class. As a result, the teacher's preparation for a course consists in designing the kinds of tasks which would provide training in the skills that the students are expected to acquire, and sequencing these tasks in the right order.

These "mini research" tasks can begin on the first day of class in an undergraduate course. For example, after making the distinction between sounds and letters in an undergraduate phonology course, I often give the students tasks like the following:

13. Sample 5

Teacher: How many of the following sound like English words, and how many don't? [blik], [flep], [spez], [psez], [gnik], [bren], [mren], [nih]

Students pick out [psez], [gnik], [mren], [nih] as "unEnglish".

14. Sample 6

Teacher: Construct a principle which will explain why novel words like [des], [leθ], [deʃ], [gis], [giθ], [giʃ] etc. are possible in English, while words like [deh] and [gih] are not.

Students typically come up something like "[h] cannot appear at the end of a word" (after some of prodding in some cases).

Teacher: Does the principle "[h] cannot occur at the end of a word" account for all the following contrasts? [miles], *[mileh], [mesti], *[mehti] . .

Students pick out the illformedness of *[mehti] as one that is not accounted for by the principle. Problem: the form does not violate the principle, and yet it is illformed.

Teacher: How would you account for *[mehti]?

Students may add the principle "[h] cannot appear before a consonant", or try to revise the earlier one into something like "[h] must be followed by a vowel", etc. , leading to further discussion.

15. Sample 7

> Teacher: Take the principle "[h] must be followed by a vowel". Does it work with respect to all of the following words? [bihaind], [him], [hyuu], [hæt], [hyuumən] (Note: [y] = IPA [j])
>
> Students pick out [hyuu] and [hyuumən] as problem cases, and explain why they are problems.

The goal of task (13) is to get the students familiar with the contrast between possible forms and impossible forms, which constitutes the data that we must account for. The goal of (14) is to provide the first taste of constructing a principle to account for the data, and revising the analysis when required by new data. (15) introduces the notion counterexample as an acceptable form predicted to be illformed by the grammar, in contrast to the situation in (14) in which an unacceptable form is not ruled out by the grammar, which is not a counterexample. Thus, these tasks of grammar construction constitute the first steps of training in observation, insight, creativity and reasoning (7a-d) needed for research in linguistics.

Similar strategies are applicable to syntax as well. Thus, the teacher can present the facts in sample (4) without giving out the solution, and extract the solution out of the students through the appropriate use of questioning strategies. Instead of giving the student the generalizations on the auxiliary system in English, the teacher may provide data like *John will write*, **John will writes*, **John will writing*, *John is writing*, **John is write*, **John is writes*, *John writes*, *John will be writing* etc. , and get the students figure out the principles which will account for the data. In order to give the students a feel for demonstrating a principle, one may require the student to demonstrate that the subject must agree with the verb. Most beginners tend to give pairs like *The boy writes* and *The boys write*, and forget that the demonstration must include **The boy write* and **The boys writes*.

These are some of the relatively simple tasks that can be used during the first week of an introductory undergraduate course. During the later stages, one can use tasks which demand greater sophistication from the students, such as those in (16) -(17):

16. The illformedness of forms like *[ŋed], *[ŋis] in English (as opposed to [med] and [mis]), can be accounted for by any of the following principles:

    a. The sound [ŋ] cannot occur in English.
    b. [ŋ] cannot be followed by a vowel.
    c. [ŋ] cannot occur at the beginning of a word.
    d. [ŋ] cannot occur at the beginning of a syllable.
    e. [ŋ] cannot occur in the onset of a syllable.

    Argue in favor of one of these principles, using your own data.

17. Check the validity of the following arguments:

a. In *Silly boys never pinch pretty girls*, *silly* and *boys* form a single construction because *silly* modifies *boys*

b. Pronouns cannot c-command their antecedents in English. In *John admires him*, *him* cannot take *John* as its antecedent. Therefore we conclude that *him* c-commands *John*.

The task in (16) involves (a) identifying the predictions made by the proposals, (b) looking for the data relevant for these predications, (c) rejecting principles which make false predictions, and (d) choosing between alternatives in terms of their ability to simplify the overall grammar. The task in (17a) requires the student to unearth hidden assumptions in an argument, and check if these assumptions are valid or not. (17b) involves paying attention to the distinction between sufficient and necessary conditions and avoiding the archetypal trap of mixing up the two, an error that is common in the work of beginners, and not uncommon even in published research. The reader is referred to appendix I for a more complex exercise.

The workshop method of teaching differs from the traditional strategy of combining lecturing in the classrooms with problem solving assignments outside the classroom in two radical ways. First, as pointed out above, skill building tasks in the workshop method are not optional supplements to be relegated to the time outside the class hours, but are an integral part of the classroom activity around which the course develops. Second, the tasks selected for this purpose are designed in such a way that the students ultimately end up constructing the *grammar* of a language, not merely solving unrelated problems from a number of languages. If one is reasonably smart, it is always possible to propose a solution to an isolated piece of data using the strategies employed in solving cross word puzzles. Constructing a grammar for a large body of data from a language requires paying attention to the interaction between different components, and involves skills of a higher order: it forces you to make the solutions in one part of the grammar consistent with those in another, it reduces your options considerably and minimizes clever footwork, and it gives you the excitement of building an intellectual object, not unlike the excitement of buiding a complex piece of scultpure. None of these is present in solving unrelated problems in assignments. The difference between the two is as vast as that between writing a number of squibs and writing a Ph.D. thesis.

3.3. Classroom Strategies in the Workshop

The lecture method is *teacher driven* in the sense that what happens in the class (as well as the overall content of the course) is determined solely by the teacher. In this mode of teaching, student participation is minimal, and is often seen as an optional extra. A lecture is the *monologue* of a teacher, the students being the audience. In contrast, a workshop class is a *dialogue* between the teacher and the student, and therefore student participation is integral to the workshop method: if the students do not participate, the dialogue cannot proceed. We may therefore say that the workshop method is *student-teacher driven* in the sense that student participation is as important as the teacher's input in determining the classroom activities and the shape of the course.

The teacher's contribution in the dialogue is designed in such a way that it helps the student to discover generalizations, construct solutions, see the errors of logic, etc. Needless to say, this would be a *Socratic dialogue*, with the teacher's questions giving gentle nudges to move the student in the desired direction. Quite often, however, the student comes up with a proposal that the teacher has not anticipated, and the teacher has to deal with this proposal in the same Socractic fashion. This situation demands some amount of flexibility and resourcefulness on the part of the teacher. First, the teacher has to make a quick decision whether the student's proposal is to be accepted or not, and, if it is not, design a new exercise on the spot to make the students see the defect on their own. If, on the other hand, the students' proposal is acceptable, the teacher must incorporate it into the grammar being developed, which might change the shape of the grammar and hence the shape of the course in minor or even major ways.

In a phonology course I taught at Stanford, for example, I was planning to extract from the students the principle that [h] cannot occur at the end of a syllable. In order to do this, I asked them to construct a principle which would explain why English allows (novel) forms like [des], [def], [deθ], [deʃ], [bis], [biʃ] etc., but not *[deh], *[bih] etc. As I had anticipated, the students came up with the principle that [h] *cannot occur at the end of a word.* I agreed that their principle did account for the data I had given, but would it also account for the new set of data involving the contrast between the possible forms [deski], [defti], [deθti], [deʃpi], [misti], [miʃpi] and the impossible forms *[dehki], *[mihti]? The students saw that it didn't, because [h] did not occur word finally in these forms, and therefore did not violate their original principle. In order to account for the new data, some of the students proposed the principle that [h] *cannot occur before a consonant.* As the next step, I suggested that they construct a single principle to account for both sets of data (*[deh] and *[dehki]), instead of using two different principles.

Upto this point, everything had gone the way I had anticipated. I was hoping that the students would at this point come up with the principle that [h] *cannot occur at the end of a syllable*, and that I could follow it up with a mini-lecture on (a) accounting for data in terms of explicit principles which make predictions that match observed phenomena, (b) the need to revise the principles on the basis of new data, and (c) choosing between alternative analyses on the basis of simplicity. Unlike what I had expected, however, one student came up with the principle that [h] *must be followed by a vowel.* This principle did account for all the data on [h] so far presented to the class, and therefore I accepted it. If words like *hue* and *human* are analysed as having a consonant [j] following [h], this principle wouldn't work, so I wanted to see if the students could think of these words on their own. I asked them to check if the principle would work on the basis of other data they could think of, hoping that it would provide training in looking for relevant data. They couldn't, and therefore I gave them a list of words consisting of [benti], [skim], [hjuu], [twist] and [gres] (hiding the relevant data in the noise), and repeated my question. Immediately, they saw that [hjuu] falsified the proposal that [h] must be followed by a vowel. I used this opportunity to present the notion "counterexample". The students were asked to revise their analysis incorporating the new data, and one of them came up with the principle that [h] *cannot be preceded by a vowel*, which accounted for everything examined so far. Now was my chance to give further practice in looking for relevant data, and I asked them to check if the principle was correct by looking for counterexamples. This time, they came up with counterexamples like [bihaind] on their own. With some prodding (which involved my telling them that they might find the notion syllable useful), the students finally arrived at the principle that [h] *cannot occur at the end of the syllable*.

This time, the student who had originally proposed that [h] cannot occur before a consonant pointed out that the new principle was inadequate, since it did not explain why forms like *[dehk] and *[miht] were bad, in contrast to [desk] and [rift], and that her principle correctly accounted for it. I was overjoyed, and agreed with the student that we were in a fix. The conclusion to draw was that the principles that [h] cannot occur at the end of a syllable and [h] cannot occur before a consonant were both correct in a sense, but then we were missing some important generalization which made [h] behave in this fashion. I drew the parallel between this situation and the controversy between the conception of light as waves and the conception of waves as particles, each of which was able to account for phenomena that the other couldn't account for, and pointed out that this was an archetypal situation in any scientific investigation indicating that there was something missing. The two statements about [h] couldn't be united without using the notion coda ([h] cannot occur in the coda), but this was not possible at that point because the students had not been yet exposed to the ideas on syllable structure. Therefore we had to reserve a revised analysis of the facts of [h] for a future class.

These unexpected developments in the class suggested a parallel treatment for [ŋ]. In order to reinforce what the students had learnt in the discussion of [h], I designed an exercise on [ŋ] that essentially follows the same steps (given in (16)), but requires more initiative on the part of the students in looking for relevant data.

If dialogue of this kind is to be successful, it is important that the teacher resists the temptation to provide solutions, including solutions to the problems which accidentally surface in the class discussion, and insists on the students solving them by providing additional data or questions. It has been my experience that this takes a great deal of discipline, patience, and optimism on the part of the teacher, but ultimately it pays off. I have often had to wait in silence for five or ten minutes in the class while the students grappled with a problem. For one who is used to the lecture method, total silence in the class could be quite unnerving, because one tends to equate silence with absence of activity. This is no longer true of the workshop method.

For the student-teacher dialogue to be effective, it is also necessary for the teacher to take the students' proposals, comments, and objections seriously, and build activities around them. For this purpose. I have found it useful to write up the ideas proposed by each student on the chalk board, and invite other students to evaluate these ideas. The class progresses in terms of proposals, criticisms, counterproposals. and comparison of alternative proposals. There is no better way to teach linguistic argumentation (inventing and evaluating arguments) than to get the students argue with each other and with the teacher.

I may mention that. given the unpredictability of the student input to the dialogue, there is always the possibility that the teacher makes more errors in the class due to hasty thinking, than is likely in the lecture method. Instead of being worried about this possibility, I would like to think of these contexts in a positive light, because there is nothing as encouraging for a student to disover that teachers are not infallible, and to be able to catch the teacher on the error. The experience of the teacher making occasional errors frees the student from the fear of making errors, and brings in the realization that making mistakes is to be expected in any scientific investigation. If the teacher admits his error cheerfully and apologises, without being embarassed about it. the student also learns to do likewise.

A question that comes up at this point is: can the workshop method be employed in a large class? Wouldn't the dialogue demanded by the workshop mode of teaching demand that the number of students be small?

The answer is that it is indeed true that direct oral dialogue between the teacher and the student is possible only when the number of students in the class does not exceed. say, twenty or twenty five. When the class gets larger. the teacher has to resort to compromises such as organizing class activity in groups. or using problem sets to feed into the class activity. In a class of two hundred students that I taught in Singapore, for example. I divided the students into twenty groups. and required them to submit written answers to the weekly assignments after they discussed the assignment in their groups. Since each group submitted a common answer, going through the assignments was not very difficult. I designed the assignments in such a way that the student answers constituted at least partial solutions to the problems that I was going to tackle in the next class, or at least prepared the students for the class discussion by making them struggle with the problems. Thus. the dialogue was implemented partly by my raising the questions in the assignment, the students answering them in the written form, and my discussing their answers and proceeding further in the next class. in addition to the provision for their direct oral remarks in the class. While strategies of this kind do not yield results comparable to direct oral dialogue, they represent ways of making compromises without completely abandoning the spirit of workshop training.

Finally, I have found it quite useful to spell out, right at the beginning, what the objectives of the workshop course are, and to explain at each stage in the course what kinds of skills each exercise is expected to develop. Those students who are used to the lecture method might feel more at home with a content oriented course, at least during the initial stages, and feel quite disoriented when faced with a skill oriented university course. It takes quite some time and effort to get these students see what the aim of the enterprise is: they can't be expected to achieve the objectives of the course unless they can see clearly what they are expected to achieve.

3.4. The Place of Content in the Workshop

In the workshop method of teaching, the emphasis is on the skills that we want the students to acquire, rather than on the information content. This does not mean that the student does not acquire any information at all, or that no attention is paid to this aspect of training. Rather, information is acquired as part of the acquisition of skills, almost as an inevitable offshoot of aiming at investigative skills.

The information that we expect the students to have by the end of the course may be at the level of the grammar, as in (18), or at the level of the framework, as in (19):

18. a. [ŋ] does not occur in the onset in English.
    b. Voiceless stops are aspirated at the beginning of a stressed syllable in English.
    c. Suffixes like *-ity*, *-ic*, and *-ion* affect word stress, but affixes like *-ness*, *-hood*, and *-dom* do not.
    d. Pronouns can precede, but not c-command their antecedents in English.

19. a. Phonetic and phonemic representations
    b. Phonetic and phonemic segments
    c. Syllable, nucleus, onset, coda
    d. Distributional rules that impose conditions on phonemic representations, and structure changing rules that change phonemic to phonetic representations
    e. Word, stem, affix
    f. The notion c-command

In a grammar construction course that employs the workshop methodology, the information in (18) would be discovered/invented by the students in the process of doing the tasks that the teacher gives them, while the information in (19) would be provided by the teacher. In a sense, (19) constitutes some of the *tools of grammar construction*, and (18) constitutes some of the objects constructed with these tools.

Needless to say, the presentation of these tools that a framework provides requires the use of expository lecturing. What is important, however, is that this occasional lecturing is used very sparingly, and that the information provided by the teacher is minimal. That is to say, the teacher introduces some machinary of the theory at a stage when the students need the tool in order to handle the data that they are trying to account for. In other words, the teacher provides only that amount of conceptual structure which would support the research acivity that the students are engaged in. Information content that cannot feed into the research simulation in the workshop is systematically avoided during the initial stages.

To take an example, the notion c-command would be presented to the student only when the students are about to grapple with the problems of pronominal or bound anaphora, as a conceptual tool that will allow them to construct an analysis. In contrast, something like binding condition A in the Government binding theory would not be introduced in an introductory course in syntax, as it is most unlikely that the students of an introductory course would have sufficient mastery over the concepts of binding, government and governing category, to be able to construct analyses with these notions. Information of this kind would be reserved for an advanced or specialized course in syntax.

Even at the level of the grammar, it is not the case that every part of what is being built should be contributed solely by the students. In every grammar, there exist ideas which require flashes of imagination, and we cannot expect an average beginner to replicate the equivalents of these ideas. For example, at some point in a phonology course, the student should know about the solution to alternations like [ai]/[i] (*divine/divinity*), [ii]/[e] (*serene/serenity*) in terms of vowel shortening and diphthongization, postulating abstract representations like /diviin/ and /sereen/. We can't extract this solution from the students however hard we may try, and therefore it has to be given to them in terms of expository lecturing.

In short, what I am suggesting is that every bit of information content is carefully scanned by the teacher to check if the students can arrive at it on their own, and the teacher contributes only those bits which are (a) essential for the further development of the course, and (b) cannot be arrived at by the students on their own.

The advantages of this approach to the information content of a course are as follows:

- Information that the students themselves have discovered or created is more meaningful, and stays longer than the readymade information provided by the teacher. A student who has struggled with the data and arrived at the principle that voiceless stops in English are aspirated at the beginning of a stressed syllable is unlikely to forget it, and even if he forgets it, he can easily reconstruct it. If the principle is provided by the teacher, it is retained only till the the end of the examinations if the student has no need to use it afterwards. Even in cases where the students can't construct the solution for the data and the teacher has to hand it down, the very fact of having struggled with the data and arrived halfway through makes the principle more meaningful, and is retained longer.

- The students know that the grammar that *they* have constructed, and all the principles in it, are subject to modification on the basis of further data. From this knowledge, it is but a small step to the realization that all grammars and linguistic theories are of the same tentative nature. There is no better way of warning the students against taking any theory as the ultimate truth in linguistics.

- Since the proposals that emerge out of the grammar construction course undergo constant modification, the students develop the flexibility and openness of mind needed to modify and abandon previous principles and theories.

Many teachers realize the advantages of the workshop method, but are unwilling to try it out because they feel that it would not give them sufficient coverage of the topics. My experience has been just the opposite. During the initial stages, the workshop method results in a painfully slow pace, particularly if the students are not used to thinking actively for themselves and coming up with proposals. Once they get used to it, the pace is much faster than that of the lecture method, and the teacher ends up covering more ground (see appendix II). In a twenty five hour course on English syntax that I taught in Singapore, for example, I began with notions like noun, noun phrase, linear order, hierarchical structure etc., and was able to get the students to construct Ross's island constraints on their own before getting to the end of the course, in spite of spending a great deal of time spelling out the differences between Hallidayian syntax and generative syntax. Even the initial slowness (and anguish) would be considerably reduced if a greater number of teachers are willing to employ the workshop method.

3.5. Central Concepts Versus Mechanics of Problem Solving

In guiding students in grammar construction, I have found it useful to emphasize the nature of linguistic theories as sets of *assumptions about human linguistic systems* as distinct from sets of *tools to account for linguistic data*. One way of making sure that students don't end up with the *mechanics* of a linguistic theory (instead of the *conceptual structure* of the theory) is to delay presentation of the notation and formalism to a point when the students can see for themselves that what formalism does is embody the assumptions of a theory in a concrete and explicit fashion. When I teach introductory phonology, for example, I do not introduce the formal notation of phonological rules (the arrow, environment slash, parentheses, brackets etc.) untill the second half of the course, by which time the students have arrived at a full understanding of concepts such as structure, structure-building operations, structure-changing operations, and underlying representations. Introducing the machinery of arrows and braces to students who do not understand the motivations for underlying representations is like giving pocket calculators to children who have no understanding of arithmetic. If the students are clever, they might learn how to manipulate the tools, but we would be producing competent linguistic engineers, not researchers who can further our understanding of language. As for our educational goals, it is obvious that a preoccupation with formalism will not provide anything useful to a future nonlinguist except the ability to manipulate abstract symbols. What is more relevant for a future nonlinguist is the understanding of and the ability to manipulate concepts, and extend them beyond the domain of linguistics. One of the values of the concept of hierarchical structure in phonology at the level of the segment, syllable and foot, for example, is that the student can see with greater clarity similar patterns of organization in the universe: at the level of the atom, molecule, living cell, and living organism.

What I am driving at is that the teacher should make explicit the assumptions which are being used in the construction of grammars, justify their use, and consider alternative assumptions. Teachers who do active research in phonology often tend to take some of the fundamental assumptions for granted, and fail to raise issues like why we need underlying representations, and why we need distinct segment inventories for underlying and phonetic representations. Spelling out these basics is extremely important in introductory courses for both professional and educational reasons: it teaches the students to be critical of the hidden assumptions which are crucial for many debates in linguistics. it also teaches them to be wary of hidden assumptions in any domain of intellectual activity.

3.6. The Place of Surveys in the Training Program

To do intelligent research on language, it is necessary for the future linguist to acquire the right "perspective" on issues in linguistics, both from a historical point of view, and from a contemporary point of view. Thus, we agree that a linguist who has a sense of history, that is, one who is aware of our indebtedness to classical phonemics without forgetting the mistakes that our predecessors made, is able to identify in current syntax the inverted reappearance of some of the generative semantics solutions, and is sensitive to the archetypal issues in linguistics appearing in the cycles of history, can do linguistics more insightfully than one who has never heard about Pike or Halliday. A linguist would also have great advantage if she is aware of the kinds of issues and solutions that permeate the contemporary scene, and is able to separate the conceptual differences between the various linguistic theories from the mechanics of their implementation and formalism. How and when can we develope in our students the right perspective on the linguistics of our predecessors and contemporaries?

The answer to the first question, I think, would be to introduce brief *surveys*, both as a part of a non-survey course and as a fullfledged survey course, on the current linguistic scene, as well as on the linguistics of the past. These courses should be designed with two clear purposes in mind. First, they should help the student to see, as far as possible on his own, the strengths and weaknesses of various alternative and complementary approaches to the study of language. The central question should be, "What can I learn from their achievements and their mistakes?". Second, the surveys should focus on the evolution and diversification of the *conceptual issues* and enable the students to see the conceptual issues of current linguistic research, often obscured by the mechanics of implementation and multiplicity of near notational variants that look totally dissimilar.

By way of answering the second question, namely, at what point the surveys should be introduced, let us remind ourselves that the perspective on contemporary linguistics and the linguistics of the past is needed only for those who want to become professional linguists, and would be irrelevant for the others. It would be advisable, therefore, to reserve this perspective for a stage when the students have decided whether they want to join the graduate program in linguistics or not. This would mean that brief surveys can be part of a regular course (e.g. a two week survey of the developments from Syntactic Structures to REST in a course in syntax) only at an advanced level, and fulfledged surveys should be made available only to those who are going to join the graduate program in linguistics, say, during the third year of the program.

There is yet another reason for reserving surveys to the later stages of a program. In order to have full benefit of a survey, it is essential that the student be able to relate the issues being discussed to her nucleus of active knowledge built through first hand research experience. A discussion of the kinds of problems that classical phonemicists were struggling with, what determined the kinds of solutions they adopted etc. would make more sense to a student if she has already actively struggled with data and tried to construct and evaluate phonological analyses. Without this ability, all that the student can hope to do is accept blindly whatever the teacher has been saying or whatever is printed in a book, without being able to evaluate these statements, or even understand their true meaning. Courses on grammar construction, therefore, are prerequisites to any kind of survey.

If what I have said is on the right track, it would be disastrous to combine historical surveys with introductory courses. I have seen, for example, several phonology courses in which the teacher introduces the students to phonology through the principles of classical phonemics, and after an exercise session involving minimal pairs and complementary distribution for several weeks, decides to abandon the theory in favour of, say, an SPE type theory. Curiously enough, it is only in linguistics that teachers are perfectly willing to teach a theory which they know for certain to be false. Imagine what would happen if physicists followed suit, and developed introductory physics courses that began with Aristotelean physics, and reached Galileo by the end of the course, reserving modern physics to advanced courses!

3.7. Relation between State of the Art and Introductory Courses

Similar observations apply to bringing in the "latest" ideas in the field when students have not mastered the fundamental ideas yet. For example, I would consider the first step in an introductory course in phonology to be to convey the following insights:

- Even though actual speech does not exhibit discrete segments, we need to postulate abstract representations using *segments* in order to account for the regularities in speech

- In order to account for regularities in the segment inventory of natural languages and the way segments form groups, we need to assume that segments are composed of atomic properties called *features*: thus, segments have an internal *structure*

- In order to account for the distribution of segments in words and morphemes, we also need to assume that segments group themselves into higher level structures called *syllables*.

- Thus, there are at least two *levels* of phonological organization, namely, the organization of features into segments, and the organization of segments into syllables.

A great deal of activity is required on the part of the student to internalize the meaning of these statements in such a way that they become part of his *experience*. If the class has not reached this stage, it would be a serious mistake to introduce the students to the theories of feature geometry or extrametricality. Bringing the students to current research is not handing down the latest *technology* available in the market, but taking them to a point from where they can make sense of the current *conceptions* of linguistic organization, and share our *insights*. The danger of going too quickly to current research is that it might force the students to pick out the technological tools without comprehending the insights behind the tools.

I am not suggesting that we can ignore current research when teaching an introductory course, and start with, say, classical phonemics. What I am pleading for is a tempering of current ideas and theoretical apparatus with pedagogical wisdom, which may demand a distillation of the core of current insights without burdening the students with details of the technology, even if this leads to a degree of distortion due to oversimplification. The workshop method is particularly suited for this purposes because it harmonizes the teacher's and the students' pace, thereby ensuring that the concepts and insights are well established in the course of the simulated research in the class room.

3.8. Workshop and Reading

As pointed out earlier, most conventional university curricula are geared towards scholarship, not training in knowledge creation. The catchwords of the traditional attitude are *familiarity with the literature* and *critical understanding* of the concepts or theories that others have proposed. The general assumption seems to be that practice in research skills cannot begin until the student has read the relevant literature. This assumption has two unfortunate results. First, since the literature on any field continues growing faster than one can read, no one can ever hope to read all the "relevant" literature, which means that the students never get to do any research. Second, the overemphasis on reading destroys all the creative and exploratory urges, so that when the students are forced to do research, as in a Ph.D. program, they have already become incapable of creativity.

It is indeed true that actual research cannot begin until the researcher is familiar with the literature in the field, but it is not true that practice in research skills through *simulated research* needs to be delayed until the student has mastered the literature. Thus, problems which are used as tasks to train undergraduate students may already have been solved in the literature, and therefore do not constitute actual research. As simulated research, however, they provide the necessary training in research skills.

There are two reasons why reading the literature should be delayed until the students have acquired the basic research skills. First, meaningful reading cannot begin until the student has developed some research skills, and his research interests act as the nucleus around which the knowledge gathered from reading can form patterns. In other words, we should be aiming at active *creative understanding*, not merely the passive *critical understanding* of the literature. Second, if *critical understanding* implies the ability to *evaluate* what is presented, and accept or reject it on the basis of the evaluation, then true critical understanding in formal linguistics presupposes the kinds of skills that a course in grammar construction seeks to develop. In order to critically evaluate an idea, one should be able to (a) deduce the predictions it makes, (b) test these predictions against a body of data, (c) compare the idea with alternative ideas, etc. These are precisely the skills that the workshop method focusses on, by providing training in grammar construction. If intelligent reading involves an active process of evaluation, then it cannot begin until a nucleus of grammar construction skills have been established first.

Given this prespective, it follows that it is not sufficient in a training program to give the students a lengthy reading list and expect them to develop the ability to read intelligently by simply plodding through all the reading material. Typically, those teachers who specialize in lengthy reading lists sprinkle the reading material with their comments on the articles/books in the form of marginalia, hoping that this may teach the students to be "critical". Such random "critical comments" can hardly provide any skills of critical evaluation. Instead, what we need is a course that provides training in reading skills, *after the students have acquired grammar construction skills*. In such a course, training in reading can be provided by designing specific *exercises in reading* accompanying each item that the students read. These tasks may include identifying the issues addressed by the author, translating the issues stated by the author into some other framework or some other approach, checking the logic of argumentation, unearthing and evaluating the author's hidden assumptions, checking the data, deducing the predictions of the author's proposals (sometimes unnoticed by the author), comparing the author's proposals with alternative proposals, etc. Training in these components of reading skills can hardly be achieved by lecturing to the students and making them read all the "relevant material". What is needed, instead, is a workshop course on reading skills.

4. Workshop for Nonlinguists

4.1. Other Professional Goals

Having argued at length for the use of the workshop method of teaching linguistics in order to train those students who want to pursue graduate studies in linguistics (goal (4a)), it is now necessary to examine the relevance of the workshop method for other types of goals (4b-c) and (5). Take the case of students who would be joining language related graduate programs (4b). In order to design a good course for these students, it is necessary first of all to ascertain their *needs*. For example, how much of linguistics, and what kind of linguistics, does someone specializing in language teaching or speech patholody require? In order to answer this question the linguist and the language teaching specialist or the speech pathologist should consult each other fairly closely, and the course taught by the linguist should require constant monitoring by the outside specialist. Even after such close cooperation, answering this question is extremely difficult. I happen to have some training in the methodology of language teaching, but I see no straightforward ways of answering the question how much linguistics and what kind of linguistics a language teacher needs.

In the absence of a clear idea of the needs of the consumer, all that we can do is to abandon attempts at tailoring courses to the specific needs of the consumer, offer a general course, and hope that the content and skills taught in the course would turn out to be useful to these students. If so, the workshop method works as well as the traditional lecture method for most needs, and much better for some of them. One of the demands that students of other graduate programs have is *literacy in linguistics*, by which I mean the familiarity with the basic concepts and terminology in linguistics such that they can read the articles and books in their field without getting confused about references to unfamiliar linguistics concepts. Since the workshop method can cover as much content as the lecture method, it will satisfy the literacy demand, but if the consumer is after a quick and painless acquintance with the terminology and concepts and does not demand active understanding, it would be better to offer a *survey* course using the expository lecture method. Needless to say, such a course would be inappropriate for those who want to specialize in linguistics or are looking for investigative skills.

Another aspect of training geared towards (4b) is *application* which implies that the teacher must provide those skills and concepts in linguistics which are applicable in the students' field, just as physics is applicable in engineering. The application of linguisitics to related disciplines can be minimal, as in the case of language teaching, or extensive, as in the case of artificial intelligence. I would therefore recommend a general introductory course that provides the bare minimum of concepts in a course meant for everyone, with specialized topics and areas being reserved for advanced optional courses.

I am not quite sure that the use of the workshop method has any dramatic advantages for literacy and application (goal (4b)), but it has been my experience that this method is unparallelled in attracting students to linguistics (goal (4c)). There is nothing as satisfying as being able to create knowledge, and the students who have tasted the excitement of constructing a grammar in the classroom generally get addicted to the activity. Students find it appealing for two reasons: (a) it is far preferrable to *do* something in the class than *listen* passively to the teacher, (b) it is extremely ego satisfying to have one's proposal accepted by the teacher and be made part of the grammar being built in the class.

4.2. Educational Goals

4.2.1. Workshop and Intellectual Skills

I now turn to the advantages of the workshop method for those students who are not going into professions that require any knowledge of linguistics (goal 5). As stated earlier, the specific *content* of linguistics, such as what is listed in (18) and (19) will be of no use to someone who is going to end up as an economist or a senator. We must, therefore, look elsewhere for the justification of having put them through a linguistics course. The benefits lie in the general strengthening of the intellectual equipment and ability to learn.

For a future economist or business executive, taking a course in linguistics should be like going through an intellectual jogging program. For this purpose, the workshop method is best, for its goals are clearly fixed on mental skills such as reasoning, observation, insight, critical evaluation, and creation of ideas ((7a-d)), emphasising the ability to learn ((3e,f)) rather than the ability to remember ((3b,c)) or the product of learning ((3a)).

Each discipline tends to employ certain modes of thinking in preference to others, and one of the advantages of taking acadmic courses in disciplines unrelated to one's profession should be the enrichment of one's thinking repertorie. Formal linguistics, for example, typically makes use of an abstract deductive reasoning not frequently found in history or art criticism, and therefore taking courses in history and linguistics should in principle activate different dimensions of the intellectual equipment. In formal linguistics, "understanding phenomena" is equated with "being able to make correct deterministic predictions of the phenomena". In contrast, understanding does not necessarily require deterministic predictions of phenomena in social sciences. Therefore taking courses in formal linguistics should give the students a feel for the mode of understanding based on deterministic predictions.

More important than these specific skills, the training involved in the workshop method teaches the students the essentials of the rational mode of inquiry that we call science. In a sense, linguistics enjoys a unique status among all sciences because (a) its data is easily within the reach of everyone, and (b) there are many unexplored languages and unexplored areas in well documented languages which even beginners can investigate. As a result, a bright student with some luck can write a publishable squib after a year's training in linguistics, which is extremely difficult in any other science. Thus, a student can participate in research activities in linguistics right from the very beginning, even in an undergraduate course, and gain first hand experience in the methods of scientific investigation. The workshop method of teaching maximally exploits this advantage that linguistics enjoys over other disciplines.

As part of this training, students also learn to distinguish facts from assumptions, and dogma from assumptions supported by evidence. The essence of the workshop method is that the students create the assumptions needed to account for the facts and provide a rational defense of these assumptions. This training gives them insight into the true nature of hypothetical entities like noun phrase, phoneme and syllable. From this understanding, it is easy to see how entities like force, field, etc, are also assumed entities, not physical entities, and Darwin's theory of gradual evolution and survival of the fittest is also a man-made idea which is close to having become a dogma. The ability to distinguish facts from assumptions and the ability to evaluate the evidence presented in favour of assumptions is what distinguishes an educated mind from an uneducated one. In actual life, many of us behave like uneducated people when we accept statements made by "authorities", which is what happens when we stop eating food that contains coconut because it contains cholesterol, without knowing exactly what cholesterol is, and without finding out what the evidence is for saying that cholesterol is harmful to health. Hopefully, training in linguistics, which involves a great deal of activity in producing evidence in favour of or against assumptions, would minimise this kind of acceptance of the popular dogma (even when it comes from science), or at least make us aware of the fact that we are accepting a statement as dogma because we do not have the time or the training to seek evidence for it.

If we accept the position that those who are not going to pursue language related professions would find the value of linguistics courses in the training that it provides in the modes of reasoning, insight, creation of ideas, critical faculty, and powers of observation, then undergraduate linguistics courses must be designed and implemented in such a way that the training program maximizes these values, while simultaneously catering to the needs of future linguists and future "applied" linguists. This can be done by designing the objectives of a course at different "levels", and designing and implementing the tasks of the workshop in such a way that they satisfy the objectives at each level. For example, the lowest level objectives of a course in the phonetics and phonology of English would require that the students at the end of the course be familiar with some of the *facts* of the phonetics and phonology of English at the level of *English grammar*, such as: the first segment in *zoo* is a voiced alveolar fricative, voiceless stops are aspirated at the beginning of a stressed syllable in English, the velar nasal does not occur in an onset in English, *-ion* and *-ic* are suffixes that affect stress while *-ness* and *-hood* are not, in most compounds the primary stress is on the first member, and so on. Knowledge of this kind would come in handy for those who are looking for a description of English. In the workshop method, this description is arrived at by the students themselves, using the tools that the teacher has provided, and therefore the students also gain some understanding of the *theory* (the second level) and *paradigm* (third level) that provides these tools, by practicing the *skills of handling the tools of grammar construction*. Thus, in addition to learning something about English phonology, the students also learn, at the level of the theory, notions like representation of speech in terms of segments, syllable structure, phonetic and phonemic levels of representation, distributional restrictions vs rules that change phonemic representations to phonetic representations, rule ordering, etc.. They also learn the rationale behind the use of these tools, namely, why we need the notion "segment", mechanisms to handle distributional restrictions, the additional complexity of phonemic representations in addition to phonetic representations and distributional rules, to rule ordering, and so on (see appendix II).

By using this conceptual apparatus in the construction of a grammar, the students of a workshop course learn how to record facts of pronunciation by listening carefully, how to collect data by eliciting judgements, using play languages or other techniques, how to construct solutions using distributional restrictions of various kinds, phonemic inventories, and structure changing rules, how to provide arguments in support of their proposals, how to check the predictions of a proposal, and so on. Training in these skills constitute the focus of the workshop method.

During this training, the students also imbibe certain elements of the paradigm. Thus, in a course that teaches grammar construction within the theories of generative phonology, they learn to recognize the implications of accepting, as the object of inquiry, the language faculty that constitutes a subpart of the individual mind (as opposed to, say, language as a social entity). They understand why data from play languages, speech errors, speech recognition, versification etc. become relevant for the investigation of this object, and why a grammar must be shown to be "learnable", and why explanation in this paradigm is "acquisition based". What is unconsciously imbibed in this manner can be easily made conscious if the teacher spells out some of the issues using the expository lecturing mode.

An indirect result of all this is that the student gains some understanding of the rational mode of inquiry in general. The results of the intellectual activity that involves the use of the scientific approach, critical faculty, observation, creative faculty and insight in the domain of linguistic investigtion would also (hopefully) be transferred to other domains of life. The way I see it, this hope of transfer constitutes the sole justification for teaching linguistics to students who are not going to choose language related professions.

As a concrete example of this idea of designing a course in terms of concentric circles of objectives, consider the circles of objectives satisfied by the investigation of the aspiration of voiceless stops in English:

- circle 1: The student learns certain facts related to aspirated and unaspirated stops in English.

- circle 2: The student arrives at an analysis for these facts.

- circle 3: In the course of arriving at 2, the student learns how to construct a grammar within a given theory, which involves: accounting for facts by making certain proposals, checking to see if the proposals do indeed account for the facts, evaluating alternative proposals, etc.

- circle 4: Since the theoretical equipment for grammar construction is built up step by step, the student also learns to build phonological theories by putting together individual assumptions which are consistent with each other. In an introductory course, these involve assumptions about features, segments, syllables, phonetic representations, phonemic representations, structure, structure-building rules, structure-changing rules, etc.. They become aware of the need to validate each theoretical entity and assumption, and learn how to take apart the entities and assumptions that go into the making of a theory that they come across.

- circle 5: The student imbibes certain elements of the generative paradigm in the course of going through 3 and 4. In particular, she learns how the assumption that the object of inquiry in linguistic theroy is a mental entity determines the kind of data we are committed to account for, and she becomes familiar with the kinds of arguments we use to validate our proposals.

- circle 6. In attempting to improve our understanding in one domain, the students imbibe the general principles of scientific investigation and the scientific approach to knowledge: facts vs. assumptions, assumptions stated as dogma vs. those supported by evidence, the evidence for particular assumptions, the noninfallibity of science, the need for constant modification of human knowledge, etc.

The assumption implicit in the above discussion is that intellectual skills are transferrable across domains. Someone who has acquired the skills of doing phonology (or some other branch of linguistics) is better equipped to face the tasks involved in linguistics in general, and someone who has acquired the skills of doing linguistics is better equipped to face the tasks that demand scientific thinking. Hence, satisfaction of a narrow circle of *discipline-bound* professional objectives can be exploited to lead to the satisfaction of the wider circle of *general* educational objectives. If we accept this conception of undergraduate education, our task is to design courses and programs that contribute to all these circles at the same time. For this goal to be fulfilled, it is equally important to make the students conscious, at every stage, of what they are going to learn and what they have learned in each of these widening circles.

4.2.2. Workshop and Introducion to Language

It may be pointed out that, in addition to the intellectual skills mentioned above, one should also include, as part of the educational goals of an undergraduate curriculum, some of the fundamental notions and attitudes towards language. This would constitute the bare minimum of information which every educated person ought to have in order to function intelligently (goal (3a)). Thus, even though it is not necessary for every educated person to know the formal statement of the law of gravity or the fact that certain kinds of newts regenerate surgically removed lenses of the eye, it would be a serious disadvantage not to know that things expand when heated, or that the earth goes around the sun. Language being intimately tied up with the daily life of all human beings in all kinds of ways, it is indeed advantageous for everyone to have some information about this entity. Thus, among the educationary goals of the undergraduate linguistics curriculum, one may include knowledge of the following kind: notions of correctness and acceptability; the idea that languages change; language, dialects and registers; sounds and letters; the idea that no language is inherently superior or inferior; language and animal communication; descriptive and prescriptive grammar.

To put it negatively, one of the goals of this component of undergraduate linguistics programs would be to expose the popular myths about language. Not infrequently, for example, one comes across statements and questions like: "We must keep the purity of our language by eliminating all foreign elements from it"; "The speakers of English in America do not know how to speak English correctly";"The true meaning of the word X is as Shakespeare used it, people have been misusing this word during the recent years"; "Did English come from German or German come from English?"; "Japanese doesn't have any grammar". The ideas that underlie statements and questions of this kind are as unworthy of an educated person as the idea that the earth is flat, or that women have fewer teeth than men.

Observe that many of these are not part of what one might call technical *linguistics* as such, but are notions about *language* which constitute the prerequisites for doing linguistics. It is not necessary for an educated person to know what phonemes and allophones are, or what the distinction between semantics and pragmatics is, but it is necessary for him to know that "correctness" in language is a matter of convention and social prestige. The place for acquainting laymen to these concepts would be a course that provides a general introduction to language or *what every educated person should know about language*. Given that the goal of such a course is to inculcate the right attitudes to language, it would be advisable to extend the spirit of the workshop method to this course as well. That is to say, instead of *telling* the students about dialects and registers, or about correctness, it would be better to design tasks and ask questions in such a way that the students would be led to the right attitudes and conclusions on their own.

4.2.3. Workshop and Introduction to Linguistics

As stated above, it is important to distinguish between the information content of an introduction to *language* and that of an introduction to *linguistics*: the former, but not the latter, serves an important educational goal. A student who goes through a traditional introduction to linguistics gets a birds-eye view of the various branches of linguistics, and the basic concepts in each branch. Thus, as part of the phonology module, the student learns the distinction between phonetic and phonemic representations, and notions like complementary distribution and contrastive distribution. In morphology, the students learn notions like stem, affix, derivation and compounding, and learns to analyse the morphological structure of words. The teaching progresses in this fashion, until the teacher feels satisfied that the student has acquired an overall view of the whole discipline. While such a birds-eye view may turn out to be useful for those students who are going to specialize in language studies, I see no reason why the others should be burdened with information about linguistics which is of a technical nature.

A probable argument for offering an introduction to linguistics (as opposed to an intoduction to language) might be that it serves a professional goal, if not an educational goal. Thus, undergraduate students need to know something about linguistics in order to decide whether they should specialize in this field or not. (goal 4c). This goal, however, is better served by giving the students a *feel* for the kinds of things that we *do* in linguistics, rather than giving them an *overview* of the *basic concepts* in each branch of linguistics. Thus, instead of making sure that the students know the concepts phoneme, allophone, phonetic representation and phonemic representation, it would be more profitable to make sure that the students have some understanding of how to construct a phonological generalization, and how we choose between phonological principles. If we adopt this policy, the students may not end up with the basic concepts in linguistics, but they will definitely leave the course with some *first hand experience* of doing linguistics in different branches. Once again, the workshop mode is undoubtedly the best for providing this experience.

5. Summary

The central theme of this article has been the distinction between the content and the skills associated with a discipline, and the need to devise appropriate strategies for the teaching of the skills. The lecture mode, which is appropriate for exposition and demonstration, is inappropriate for the teaching of skills. In contrast, the workshop mode is ideally suited for this purpose.

The approach to teaching that I have advocated may be described as *task based* in the sense that students develop the skills we want them to acquire by accomplishing tasks which demand the use of these skills. Such tasks are usually relegated to occasional assignments in the traditional courses that employ the lecturing mode. The central point made in this article is a plea to bring these tasks to the classroom itself. The essential feature of the workshop mode of is that in this mode of teaching, skill inculcating tasks constitute the focus of classroom activity.

The best example of the task based workshop approach is a grammar construction course in which the students build the description of a language as a collective enterprise in the classroom, under the teacher's supervision. Other examples would include workshops on framework construction and/or evaluation, workshops to teach the field methods skills, workshops to teach reading skills, and workshops to teach library skills.

I have tried to argue, in this article, that the skills of grammar construction should form the first target to be achieved in an undergraduate formal linguistics program, since the ability to construct and evaluate analyses for given sets of facts constitutes the prerequisite for other types of skills, such as the ability to construct and evaluate the assumptions that go into linguistic theories, the ability to read intelligently and so on.

Another important point argued for in this article is the shift of focus from content to skills. This shift has the following consequences:

- A great deal of the content is discovered or invented by the students on their own, as a product of the tasks performed in the class. Only those aspects of content which the students couldn't have arrived at on their own are provided by the teacher.
- During the initial stages, only that amount of content strictly needed for the exercise of the skills is presented by the teacher, and only at a stage when the task in question demands it. (e.g. the notion c-command is presented only when the students need it in the solution to the problems in pronominal anaphora.)
- Content not directly involved in the performance of the tasks but is nevertheless necessary for the intelligent pursuit of knowledge in linguistics (e.g. historical perspective), is reserved for second year or third year courses for future linguists, by which time the students would have acquired the necessary investigative skills and developed a nucleus of first hand research.

The shift of focus from content to skills, leads to more meaningful courses for the students who want to become linguists or choose language related professions. It also allows for the designing and teaching linguistics courses in such a way that those students whose future professions do not require any background in language studies also derive some benefit from the courses. For the latter group, what is of ultimate value in a set of linguistics courses would not be the specific content of linguistics, but the modes of thinking that they learn in these courses, extendable to domains outside linguistics. Thus, the task based workshop mode of teaching that shifts the focus from content to skills allows us to satisfy both the educational and professional goals of teaching at the same time.

Appendix I
A Sample Exercise

Given below is a sample of a class task I used towards the end of a thirty hour introductory course in phonetics and phonology. It was intended to teach the students to be skeptical of analyses in which the same stipulation has to be duplicated a number of times in different parts of the grammar, and to look for an alternative analysis that unites the different stipulations into a single one. The facts are weaved around the treatment of the second segment in words like *cute*, *music* and *hume*, namely, the segment generally transcribed as [j] (=[y]). The issue at stake is: is this [j] part of the onset of the syllable ([kj -uut]), or is it part of the rime ([k - juut])? The latter analysis yields a simpler grammar, though the students were not aware of such a possibility during the first stage of the task.

Status of [C + j] in English

Part I: Internal Evidence

Propose an analysis for the following facts.

item 1:
a. [kwik], [kwiin], [kwest], [kwout], [kwæ k], [kwɔ m], [kjuut]
b. *[kjik], *[kjiin], *[kjest], *[kjout], *[kjæ k], *[kjɔ m]
c. [jiist], [jes], [jouk], [jæ p], [juus]

item 2:
a. [fret], [θret], [slik], [swet], [θwait]
b. *[vret], *[ðret], *[zlik], *[zwet], *[ðwait]
c. [fjuu], [vjuu], (and [zjuuz], [sjuu] in British English)

item 3: as single morphemes,
a. [rift], [lisp], [risk]
b. *[rivd], *[lizb], *[rizg]

item 4:
a. *[mret], *[mlet], *[mwet], *[nlet], *[nwet], *[lwet], *[lret], *[rwet]
*[hret], *[hlet], *[hwet]
b. [mjuuzik], [hjuu] ([njuud], [ljuuk] in British English)

item 5
a. *[ʃled], *[ʃwed], *[tʃ led], *[dʒled], *[ʒled], *[ʒwed]
b. [ʃred], but *[sred] ([sled], [swet], [sped], [sket]...)
c. as single morphemes *[riʃt], *[riʒd], *[ritʃ t], *[ridʒd]

Part II: External Evidence 1

Constuct analyses for the behaviour of group A and group B speakers, and show how the analysis for each group affects your analysis in part I.

Group A Speakers find that

a. the following pairs of words rhyme:

sit/bit, met/get, lisp/crisp, fled/bed, little/brittle, backs/tax, meeting/seating, twist/kissed, speak/leak, splash/hash, swift/rift, cute/mute, repeat/seat

b. the following pairs do not rhyme:

*sit/bet, *sit/sick, *sit/bits, *sit/little, *backs/track, *backs/backed, *cute/hoot, *meeting/seat

c. the following pairs alliterate:

sit/send, slate/slack, brain/brew, splash/spleen, fry/frog, twist/twine, queen/quote, cute/come, cute/cube

d. the following pairs do not allterate:

*sit/lit, *sit/bet, *sit/ben, *slate/lord, *slate/send, *splash/sound, *splash/speak, *splash/slide. *twist/wed. *twist/top. *cry/king

Group B Speakers find that

e. the following pairs of words rhyme:

sit/bit, met/get, lisp/crisp, fled/bed, little/brittle, backs/tax, meeting/seating, twist/kissed, speak/leak, splash/hash, swift/rift, cute/mute, repeat/seat, cute/hoot

f. the following pairs do not rhyme:

*sit/bet, *sit/sick, *sit/bits, *sit/little, *backs/track, *backs/backed, *meeting/seat

g. the following pairs alliterate:

sit/send, slate/slack, brain/brew, splash/spleen, fry/frog, twist/twine, queen/quote, cute/cube

h. the following pairs do not allterate:

*sit/lit, *sit/bet, *sit/ben, *slate/lord, *slate/send, *splash/sound, *splash/speak, *splash/slide, *twist/wed, *twist/top, *cry/king *cute/come

External Evidence 2

Check the validity of the following argument:

i. Leaving aside *cute/come* for the moment,
we can account for the data in (g, h) above by assuming the following
principle: *Two syllables alliterate if and only if their onsets are identical.*

ii. If the onset of *cute* is /kj/ and that of *come* is /k/, by principle I,
they should not alliterate.

iii. *cute* and *come* do not alliterate, as given in (h).

iv. By (ii) and (iii), we conclude that the onset of *cute* is /kj/.

External Evidence 3

Design a play language, provide the teaching sample and test sample in order
to check if the [j] that has been analysed as **Cj** as in *cute*
belongs to the onset or not.

As stated earlier, upto this point of the course, the students had been working with the assumption that *cute*, *music* etc. have two segments in their onsets (/kj/, /mj/). The alternative analysis, namely, that of analysing them as single segment onsets, and treating [j] as being inserted, or as being part of the rime, had not been discussed. The first step was to get the students examine the data under external evidence carefully, and extract principles equivalent to the following, by asking questions, presenting more data and so on, based on the branching onset analysis of /Cj/. The students came up with the following:

i. *If /j/ forms a cluster in an onset*, the following vowel must be /u(u)/ (item 1).

ii. A [-sonorant, -voiced, -continuant] segment cannot be a member of a cluster (in the onset or coda) within a single morpheme, *unless the other member is /j/* (items 2, 3)

iii. [+sonorant] sounds cannot be the first segment of an onset cluster, *unless the second member is /j/* (item 4).

iv. *Except for* /j/, a [-back, +high] segment cannot be a member of a a cluster (in the onset or coda) within the same morpheme (item 5) (/sr/ → [ʃr])

The second part of the task was pointing the students' attention to the ad-hocness of the stipulation on /j/, given in italics. The analysis given above *describes* the facts, but does it *explain* why /j/ behaves in this curious way in so many different contexts?

Having focussed their attention on the problem, I presented the possiblity of assuming that *quit* and *cute* have different syllable structures, namely, /kw it/ in which /kw/ is two consonant onset, and /k iuut/ in which /k/ is a single consonant onset. Assuming, for predagogical reasons, that /iuu/ is a nucleus, this would mean that we simply add this nucleus structure to the existing inventory of syllable nucleus in English, namely, /(i)i/, /(u)u/, /ai/, /ei/, /ou/ etc. , as opposed to */ie/, */uo/, */ue/, */ia / etc. Once this possibility was presented, the following alternative analysis was extracted from the students:

v. A [-back, +high] segment cannot be a member of a cluser (items 1, 5) within the same morpheme.

vi. A [-sonorant, +voice, +continuant] segment cannot be a member of a cluster within the same morpheme (items 2, 3)

vii. A [+sonorant] segment cannot be the first member of a cluster (item 4)

In addition to the fact that the second analysis requires only three principles as opposed to four, the strange stipulations on /j/ have disappeared in the latter, as a result of treating /iu(u)/ as the nucleus.

The goal of part II of the exercise is to give the students some feel for the kinds of predictions that the /C iuu/ analysis yields in the domain of "external evidence". The presence of group A speakers supports, and that of group B speakers goes against, the /C iuu/ analysis.

Appendix II
A Sample Syllabus

As indicated in 4.2., the syllabus for a workshop course should be designed at different levels of abstractness, the most important of which are grammar, theory, and the strategies and assumptions of the research paradigm. What follows is a sample of a syllabus I used for a thirty hour undergraduate course in phonetics and phonology:

Level I: English Grammar

1. Dictionary symbols for speech sounds in English
2. Description of the production of speech sounds in English
3. Classification of speech sounds in English
   a. Distinctive Feature classification
   b. IPA classification
4. Generalizations on the segment inventory in English
5. Syllable structure in English
6. Phonogical alternations in English:
   a. Aspiration
   b. Flapping in American English
   c. Clear and dark l in British English
   d. Vowel length conditioned by voicing
   e. r deletion in British English
   f. g/b deletion
   g. Past tense, present tense poss. plural
7. Elements of English Morphology
   a. morpheme, stem, affix
   b. compounding and affixation
   c. inflection and derivation
   d. two classes of derivational affixes

8. Complex Treatments
   a. The velar nasal
   b. Plural present tense genetive and past tense
   c. Clusters with j.

Level II: Phonetics and Phonological Theory

1. Distinction between sounds and letters
2. Phonetic Notation (level I, 1)
3. Articulatory phonetics(level I, 2)
4. Classification of segments (level I, 3)
   a. Distinctive features
   b. Traditional classification
   c. Advantages of the distinctive feature classification
5. Why do we need the notion "segment"?
6. a. Segment structure: principles that govern the way distinctive features combine to form segments (level I, 4)
   b. Why do we need segment structure rules?

7. Syllable structure: principles that govern the way segments combine to form syllables (level I, 5)
   b. Why do we need the notion "syllable"?
   c. Why do we need "onset", "rime", "nucleus", "coda"?
   d. Why do we need "head" and "nonhead"?
8. a. Morphological structure: morpheme, stem, affix (level I, 7)
   b. Why do we need morphological structure in phonology?
9. a. Phonemic and phonetic representations (level I, 6)
   b. Why do we need phonemic representations, in addition to distributional constraints and phonetic representations?
   c. Why do we need to assume that phonemic and phonetic inventories need not be identical?
   d. Why "X becomes Y" rather than "Y becomes X"?
10. Why do we need rule ordering in phonology?

Level III: The Generative Paradigm

1. The concept of science in generative linguistics
   a. Theory: hypothetical constructs, statements on these constructs, structure, predictions
   b. Explanation as match beween prediction and observation
   c. Evaluation of theories: motivation, comparison with alterntivs; simplicity, and beauty
2. The object of inquiry
   a. The human language faculty: language as an individual's knowledge as opposed to language as a social entiry
   b. Language faculty and grammar
3. Relevant data for the investigation of this object
   a. corpus: spontaneous corpus and elicited corpus
   b. speaker behaviour
      (i) Internal evidence:
         distribution (possible and impossible forms)
         alternation (possible and impossible relatlionships between forms)
      (ii) External evidence:
         (i) pauses
         (ii) play languages
         (iii) verse patterns
         etc.
4. Inventing analyses
   a. How do we account for data?
   b. How do we motivate proposals?
   c. How do we chooose the best proposal?
   d. How do we evaluate proposals and arguments?

Title	**Writing Systems and Decipherment**
Level	Upper division undergraduate
Description	Covers the origin and history of writing, types of writing systems (alphabetic, syllabic, etc.), relationships between writing and speech, codes and cryptanalysis, and decipherment of ancient languages.
Syllabus	Introduction to the Study of Writing Characterization and Typology of Symbols and Script Origin, Evolution, and History of Writing Diffusion of Writing Generalizations and Universals of Writing Cryptanalysis Decipherment of Egyptian Hieroglyphs Survey of Undeciphered and Partially Deciphered Scripts Decipherment of Mayan Hieroglyphs Implications and Applications of the Study of Writing
Requirements	Two exams, assigned exercises
Source	University of Minnesota-Minneapolis Instructor: Gerald Sanders